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“WHAT FREE TIME?” A DAILY STUDY OF WORK RECOVERY AND REGULATORY FOCUS AMONG STUDENT-EMPLOYEES

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF PSYCHOLOGY

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To Sandra, Evelyn and Liam

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Table of Contents

List of Tables

List of Figures

Abstract

Student-employees face incredible demands on their time and resources, yet little research exists assessing the degree to which they are able to recover from their demands. The current study aimed to determine the extent to which certain recovery processes contribute to the well-being of student-employees, and whether work can serve as an opportunity to recover from school, and vice versa. Additionally, the importance of regulatory focus in predicting an individual's engagement in recovery processes and the interaction between recovery processes and regulatory focus in predicting well-being was examined. In order to investigate these questions, data were collected daily for 12 days from 268 undergraduate students who were also employed. Results revealed that participation in relaxation and mastery activities is very important for well-being, with psychological detachment from school appearing to have some positive benefits, and with psychological detachment from work having little value. Prevention focus was negatively related to well-being, but was not related to psychological detachment while promotion focus was somewhat related to engagement in relaxation and detachment. Lastly, prevention focus did not interact with detachment in a consistent manner to influence well-being. Results suggest that detachment does not seem to be as important for student-employees as is engaging in relaxation and mastery processes.

Introduction

Millions of individuals hold down full or part-time jobs while also maintaining a full course load as students. For such individuals, the typical 40-hour work week does not exist. They may spend all of their weekdays going to class and working on school assignments while working full days on Saturday and Sunday as a waiter. Alternatively, each day may be a mix of schoolwork and their job. With such constraints on their time and energy, there exists the possibility that their efforts in their schoolwork and other work will suffer as exhaustion and burnout set in. This issue is especially poignant given the number of students that work. According to the most recent census, 72% of undergraduate students work, with 20% of undergraduates holding year-round, full-time jobs (United States Census Bureau, 2012). The well-being of such students should be a concern for everyone; given the need for an educated work-force for the good of society, every citizen has a vested interest in such individuals getting as much out of their education as possible. Employers also have a vested interest in this, as the performance of their student-employees has a clear impact on the success of their business. Additionally, this issue is of great importance to university administration, given their obvious focus on making sure that students have a superior educational experience.

Although working while going to school can have positive results (Butler, 2007), there are also clear drawbacks. Working while going to school is perceived by many students to detract from their studies (Curtis & Williams, 2009), is related to increased feelings of being overwhelmed (Lederer, Autry, Day, & Oswalt, 2015), and can lead to slower progress through school (Triventi, 2014). Given the demands placed

on student-workers, the ability to recover from their many demands represents a significant issue for their well-being. Research on work recovery has become increasingly frequent with regards to employees (e.g., Sonnentag & Fritz, 2015) and also has been researched for students (e.g., Ragsdale, Beehr, Grebner, & Han, 2011). Specifically, these studies focus on the way the activities and processes in which employees engage after work influence such things as well-being and behavior. Research has shown that processes and behaviors such as detaching psychologically (Sonnentag & Fritz, 2015), mastery experiences (Bennett, Bakker, & Field, under review) and exercise (Feuerhahn, Sonnentag, & Woll, 2014) are important for the well–being of employees. However, although recovery is clearly needed for student-employees given the intense demands on their time and energy, to my knowledge little to no research has been conducted on the topic.

The purpose, therefore, of this study is to extend the research in work recovery to the domain of student employees. Specifically, I am interested in the degree to which detaching psychologically from each domain—work and school—influences student well-being, and how the other recovery processes in which an individual engages influence well-being. An additional gap this study aims to fill is the lack of research integrating regulatory focus (Higgins, 1997) with occupational health psychology. Although an individual's regulatory focus has a substantial impact on various positive and negative outcomes (Lanaj, Chang, & Johnson, 2012), the research in occupational health psychology assessing the impact of regulatory focus is lacking. Additionally, to my knowledge, no research exists integrating work recovery with regulatory focus. Consequently, I will be assessing the impact of regulatory focus on engagement in

recovery processes, as well as the extent to which regulatory focus interacts with recovery processes to influence well-being.

Well-being

Given the numerous positive organizational outcomes from high employee well-being (Ilies, Aw, & Pluut, 2015), organizations have a vested interest in working to improve the well-being of their employees. Although well-being is frequently presented as a unidimensional construct, researchers operationalize it in numerous ways. In her review of the well-being literature, Sonnentag (2015) differentiated well-being into two parts—positive well-being indicators and negative well-being indicators—and showed that the two have different antecedents.

Among the indicators of negative well-being, burnout has received a great deal of attention. Burnout consists of exhaustion, cynicism/detachment, and feelings of not being effective (Maslach, Schaufeli, & Leiter, 2001). The concept of burnout was originally developed with a focus on the helping professions, such as health care, but has been expanded into work in general (Maslach et al., 2001). Indeed, job factors that can be found in any profession have been shown to be significant contributors to burnout, including workload, role conflict and role ambiguity (Maslach et al., 2001). Burnout has important organizational outcomes, including lower productivity and job satisfaction, as well as negative effects on the co-workers of the burned-out individual (Maslach et al., 2001).

Although negative aspects of well-being such as burnout are still frequently studied, Sonnentag (2015) pointed out that in the last decade and a half, organizational research has increasingly focused on positive aspects of well-being. With regards to

burnout, Maslach and Leiter (1997), as cited in Schaufeli, Salanova, Bakker, and Gonzales-Roma (2002) suggested that the opposite of burnout is a construct they called engagement. Schaufeli et al. (2002), in constructing a measure of engagement, argued that the core features of engagement are vigor, dedication and absorption. Engagement has been shown to have positive outcomes, such as explaining incremental variance in task and contextual performance over that explained by job attitudes (Christian, Garza, & Slaughter, 2011).

In assessing whether burnout and engagement really are two ends of the same continuum, Schaufeli et al. (2002) found that although they are fairly strongly related to each other, burnout and engagement are distinct constructs. In a similar study, Demerouti, Mostert, and Bakker, (2010) looked at the distinctiveness of burnout and engagement and although they were found to be distinct in some ways (mainly with vigor and exhaustion), they nevertheless found them to be strongly related. González-Romá, Schaufeli, Bakker, and Lloret (2006), however, found that vigor and dedication are indeed on a continuum with exhaustion and cynicism, respectively. Furthermore, although the three dimensions of engagement are distinct, in creating a shortened version of their engagement scale, Schaufeli, Bakker, and Salanova (2006) found, by using confirmatory factor analysis (CFA), that treating the three engagement factors as one dimension produced an acceptable fit. Given the high correlation among the dimensions of work engagement, Christian, Garza, and Slaughter, (2011) also conceptualized work engagement as a single higher-order construct in their meta-analysis.

Given the research looking at both positive and negative well-being, this study utilized measurements of each. Additionally, the well-being measures for this study were selected in order to assess both how recovery influences individuals on the same day, as well as how it influences well-being the following day. Maslach et al. (2001) suggests that exhaustion is the core aspect of burnout, and consequently a measure of exhaustion—namely fatigue—was used. For a positive measure of well-being, vigor—a facet of engagement—was assessed. Additionally, an overall measure of recovery was used.

Work-School Issues

The research looking at the impact of work on students is very mixed. Much of the research on student-employees takes the perspective of role conflict (e.g., Creed, French, & Hood, 2015; Lenaghan & Sengupta, 2007). Indeed, Butler (2007) pointed out that much of the research on the topic considers the plight of student-workers from a resource perspective, where individuals have a limited amount of resources, resulting in insufficient resources in the school or work domain. However, another viewpoint is that work can facilitate school (Butler, 2007). Past research has supported both perspectives. For example, Butler (2007) found that work can facilitate school, leading to higher levels of satisfaction and performance. However, this facilitation, although beneficial, did not remove the negative effect of hours and demands of school on work-school conflict, which was in turn related to decreased school performance. Along similar lines, although finding that working and going to school can indirectly lead to increased well-being, Lenaghan and Sengupta (2007) found role overload to be related to work interfering with school, which was related to negative affect, which was related

to decreased well-being. As further support for the beneficial as well as detrimental effects of working and going to school, Creed et al. (2015) found that increased work demands were related to increased work-school conflict, and that increased facilitation was related to an increased aspect of engagement[1]. Lastly, and in support of these findings, in reviewing the literature on working students, Ziskin, Torres, Hossler, and Gross (2010) also came to the conclusion that the results are very mixed regarding whether working is positive, negative or neutral for students.

Additional variables influence school-work conflict and also buffer its effects. Specifically, more supervisor support, higher levels of personal fulfillment from work, and more work-school facilitation result in better psychological health in the face of work-school conflict (Park & Sprung, 2013). However, it is not just the characteristics of the job or school that influence the effect of work-school conflict. Indeed, key individual differences and off-work factors influence it as well. Specifically, Park and Sprung (2015) found higher work-school conflict to be related to higher end-of-week fatigue, with sleep quality mediating the relationship. Additionally, the extent to which individuals felt able to recover (recovery self-efficacy) moderated the relationship between sleep quality and end-of-week fatigue, such that individuals with high recovery self-efficacy did not experience as much fatigue even with low sleep quality (Park & Sprung, 2015).

Given the extent of research showing the detrimental effects on student employees of demands such as work-school conflict and role overload, and the theoretical perspective of student-employees having a fixed set of resources to divide

[1] The specific aspect of engagement was dedication, albeit the variance explained was fairly low.

between school and work (e.g., Butler, 2007), the current study will examine whether recovery processes can serve as a possible mechanism to replenish resources for such individuals.

Work Recovery

As an explanation for the need for and importance of recovery from work, theories that are frequently used include conservation of resources theory (COR) (Hobfoll, 1989), the effort-recovery (E-R) model (Meijman & Mulder, 1998), and/or the job demands-resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Indeed, in developing the recovery process measures used for this study, Sonnentag and Fritz (2007) used the COR and E-R theories/models as a large part of their theoretical foundation. COR suggests that negative stress responses result when individuals face the threat of or actual loss of resources or the possibility of not gaining resources after having invested resources. According to Hobfoll (1989), such resources can consist of many things, including status, employment, self-esteem, and mastery, among others. Additionally, resources can consist of object resources (i.e., an object that confers status), condition (e.g., being in a relationship), personal characteristics (e.g., internal locus of control), and energies (e.g., time, money and knowledge). COR theory also posits that individuals will attempt to gain resources to protect against the depletion of resources in the future. Recovery from work, therefore, serves an important role with regards to the depletion of resources in that it can provide the opportunity to gain new resources (Sonnentag & Fritz, 2007).

The effort recovery (E-R) model (Meijman & Mulder, 1998) provides an alternative perspective to the COR model, positing that when individuals work, they

expend effort, be it physical effort or mental effort, which results in changes that are reversible if the systems that were being used are rested and are given a chance to recover. However, if those systems are not given the chance to recover, problems can result, according to the model. Thus, the model suggests that recovery is important to the extent that it allows the systems that were fatigued during the working day the chance to recover, while other systems should be used during recovery. The types of effort that result in depletion can take multiple forms. One example of this, which is not brought up by Meijman and Mulder (1998) but relates to the theory is a study by Baumeister, Bratslavsky, Muraven, and Tice (1998), who showed across multiple studies that exercising self-control in one setting leads to diminished ability to exercise self-control in a different setting. Thus, in terms of the E-R model, recovery from work is important in that it can provide individuals the opportunity to rest those systems that have been taxed (Sonnentag & Fritz, 2007).

Yet another theory that supports the need for recovery is the job-demands resources model (JD-R) (Demerouti et al., 2001). This theory is not referenced as often as the previous theories, with regards to work recovery, but has been linked to recovery by some in past literature (e.g., Garrick et al., 2014; Kinnunen, Feldt, Siltaloppi, & Sonnentag, 2011). In the theory, job demands, which include physical, social and organizational factors, can ultimately result in exhaustion. However, the theory also posits that resources—which include factors that help individuals to attain goals, reduce job demands and play a part in achieving personal growth—can buffer the negative effects of demands. Although the original conceptualization of the model focused only on resources that come from the job itself (e.g., feedback, autonomy), Demerouti and

colleagues also point out, citing Richter and Hacker (1998), that resources can be internal as well, including what they call "action patterns" (p. 501). Sonnentag and Fritz (2007) suggest that recovery can serve to build resources, which corresponds with this theory insofar as recovery activities do in fact build resources. In connecting the JD-R model to recovery processes, Kinnunen, Feldt, Siltaloppi, and Sonnentag (2011) found that detachment mediated the relationship between job demands and fatigue, and that mastery partially mediated the relationship between job resources and engagement.

Consistent with the above theorizing regarding the importance of recovering and building resources, the extent to which individuals feel recovered is related to various positive outcomes. For example, Binnewies, Sonnentag, and Mojza, (2010) found that feeling recovered at the beginning of the week led to increased weekly job performance, personal initiative and organizational citizenship behaviors. Additionally, Sonnentag, Mojza, Demerouti, and Bakker (2012) found that feeling recovered in the morning is related to work engagement during the day.

Along with the research looking at the importance of feeling recovered, a great deal of research has examined specific activities and processes that facilitate recovery. Multiple studies in this domain used a cross-sectional design, asking workers about the activities and processes in which they engage and seeing how those processes relate to important outcomes. Such research has repeatedly shown that individuals engaging in recovery processes have better outcomes than those who do not (e.g., Siltaloppi, Kinnunen, & Feldt, 2009; Sonnentag & Fritz, 2007). Other research has assessed the importance of specific recovery periods, such as examining how vacations, and the activities in which an individual engages while on vacation, influence recovery. For

example, a recent meta-analysis assessing the importance of vacations shows that although vacations lead to increased health and well-being immediately following the vacation, the results fade fairly quickly (de Bloom et al., 2009). Other periods that have been assessed with regards to recovery include weekends (e.g., Fritz & Sonnentag, 2005), evenings (e.g., Sonnentag, Binnewies, & Mojza, 2008) and breaks during work (e.g., Trougakos, Beal, Green, & Weiss, 2008).

As mentioned in the previous paragraph, the impact of recovery is often measured by assessing how participation in certain activities after work contributes to feelings of recovery and other positive outcomes. Researchers have looked at activities including engagement in physical activity (e.g., Feuerhahn et al., 2014), social activities (e.g., Rook & Zijlstra, 2006), childcare (e.g., Sonnentag & Bayer, 2005), and work activities during leisure time (e.g., Sonnentag & Natter, 2004). However, findings have been mixed (Oerlemans, Bakker, & Demerouti, 2014). As a possible explanation for the mixed findings, Oerlemans et al. (2014) found that for physical activities, household activities, work-related activities and social activities, the amount of recovery that was gained from the activities was dependent on how much the individual enjoyed engaging in the activity. Similarly, the amount of intrinsic motivation influences the level of recovery that is gained from leisure activities, and buffers the negative effect of duty-based activities, with higher intrinsic motivation for activities resulting in better outcomes (ten Brummelhuis & Trougakos, 2014).

Recovery Processes

Regarding the importance of recovery activities, Sonnentag and Fritz (2007) suggested a slightly different mechanism to achieve recovery, proposing that “it is not a

specific activity per se that helps [an individual] to recover from job stress but its underlying attributes such as relaxation or psychological distance from job-related issues" (p. 204). They pointed out that individuals may engage in different activities, but that the different activities actually provide the same process, such as relaxation. They proposed four specific processes that facilitate recovery—psychological detachment, relaxation, control and mastery experiences. They describe relaxation as being "characterized by a state of low activation and increased positive affect" (p. 206). They describe control as the extent to which an individual has latitude over what he or she does during off-job time. Mastery experiences are described as learning or challenging activities in an area other than the individual's job. The fourth recovery process proposed by Sonnentag and Fritz (2007) is psychological detachment, which involves distancing oneself mentally from work. In discussing the four types, Sonnentag and Fritz (2007) suggested that psychological detachment and relaxation serve to provide an individual with a break from the demands on his or her resources, in line with the ER model, while mastery experiences and control give the individual the chance to gain additional resources, in line with COR theory.

Psychological Detachment

Although all recovery processes have been found to be beneficial, psychological detachment is the most frequently studied (Bennett et al., under review). Sonnentag and Fritz (2015), in reviewing the history of the construct of psychological detachment, explained that the idea of detachment from work was introduced by Etzion, Eden, and Lapidot (1998) with Sonnentag and Bayer (2005) introducing the term psychological detachment. Psychological detachment has been studied both as an outcome (e.g.,

Potok & Littman-Ovadia, 2013) as well as a predictor of both positive outcomes (e.g., Fritz, Yankelevich, Zarubin, & Barger, 2010) and negative outcomes (e.g., Davidson et al., 2010). With regards to how psychological detachment can be an outcome as well as a predictor, Sonnentag (2010) proposed the stressor-detachment model—which has received a great deal of empirical support (Sonnentag & Fritz, 2015)—in which she suggests that detachment acts as both a moderator and a mediator of the relationship between job stressors and strain. That is, she suggests that increased job stressors lead to less psychological detachment which then leads to increased strain. However, she also proposes that the relationship between job stressors and strain is moderated by psychological detachment, with increased psychological detachment buffering the negative effects of job stressors.

In introducing the concept of psychological detachment, Sonnentag and Fritz (2007) pointed out its similarity to disengagement—an aspect of coping. However, whereas Sonnentag and Fritz showed that psychological detachment leads to positive outcomes, in the coping literature disengagement is presented as an ineffective way of coping. For example, one of the papers that Sonnentag and Fritz (2007) cite is Carver, Scheier, and Weintraub (1989), who suggested that mental and behavioral disengagement were not very effective ways of coping. However, regarding the similarity of detachment and disengagement, Sonnentag and Fritz (2007) assert that "whereas coping refers to the stressor and to the way individuals deal with it, recovery refers to the way they restore their internal resources" (p. 208)[2]. Indeed, numerous

[2] Although Sonnentag and Fritz did suggest that coping and recovery are different, they proposed that there would be a relationship between disengagement coping and psychological detachment. However, their research did not find such a relationship.

studies have shown the positive effects of psychological detachment. For example, psychological detachment has been shown to be related to less exhaustion and need for recovery (Siltaloppi et al., 2009), to lead to increased job engagement (Kühnel, Sonnentag, & Westman, 2009), and to contribute to increased well-being (Cheng & McCarthy, 2013).

Mastery, Relaxation and Control

Although not as frequently studied as psychological detachment (Bennett et al., under review), mastery, relaxation and control have also often been studied in recovery research, and have been shown to be important in contributing to well-being. For example, Fritz, Sonnentag, Spector, and McInroe (2010) found that engagement in relaxation during the weekend was related to various positive affective states, and negatively related to various negative affective states, both at the end of the weekend and at the end of the following week. In the same study, they also found that engaging in mastery experiences during the weekend was related to positive affective states at the end of the weekend. In addition to well-being outcomes, mastery, control and relaxation are related to other important outcomes. For example, across two studies, control, relaxation and mastery were all found to be related to creativity (Eschleman, Madsen, Alarcon, & Barelka, 2014).

Although the recovery processes are related to many positive outcomes across multiple studies, other studies have failed to show such a relationship. Consequently, in order to determine the overall importance of recovery processes, Bennett et al., (under review) conducted a meta-analysis of the recovery literature, in part to determine which recovery processes had the strongest relationship with important outcome variables.

Specifically, they looked at high energy (such as vigor) and low energy (such as exhaustion) as their outcomes. All four recovery processes were significantly related to low energy (psychological detachment: $\rho = -.39$; relaxation: $\rho = -.35$; control: $\rho = -.30$; mastery: $\rho = -.18$). They also found that all four of the recovery processes were significantly related to high energy as an outcome (control: $\rho = .31$; mastery: $\rho = .29$; relaxation: $\rho = .24$; psychological detachment: $\rho = .14$). Bennett and colleagues also conducted meta-analytic path modeling, and modeled a direct relationship from job stressors (both challenge and hindrance stressors) and job rewards to high and low energy, as well modeling an indirect relationship through the recovery processes. In doing this, they were able to assess the impact of each recovery process on the energy outcomes while controlling for the other processes. The results for low energy followed a similar pattern to that of the correlations. Although the effect size for control was not significant, psychological detachment, relaxation and mastery all had 95% confidence intervals which did not include zero. The beta-weights for the three recovery processes were -.18, -.08 and -.11, respectively. The results of the path analysis for high energy also followed a similar pattern as the correlations, with control having a significantly stronger weight than the others, but with all being significant (the beta weights of control, mastery, relaxation and psychological detachment were .19, .13, .08 and .08, respectively).

Considering the amount of demands placed on student employees and the constant depletion of resources, student-employees likely will benefit from relaxation. As cited previously, the E-R model posits that constant use of any system results in negative outcomes. Although work and school may require different skills and have

different demands, both require self-regulation, which can be depleted (Baumeister et al., 1998). Thus, relaxation, in which the individual does not have those resources being taxed, is likely to be important to provide an individual the opportunity to replenish those resources, leading to the following hypothesis:

Hypothesis 1: Higher levels of relaxation while not working or going to school will be related to increased well-being

Although Bennett et al. (under review) showed that mastery experiences have quite a robust relationship with well-being, the relationship for student employees may be somewhat different. According to the E-R model, when systems are taxed they need a chance to recover. Considering that Sonnentag and Fritz (2007) define mastery experiences as activities that provide "challenging experiences and learning opportunities" (p. 206), it could be argued that students are participating in mastery experiences while engaging in schoolwork. Consequently, additional participation in mastery activities may further deplete the resources used while completing schoolwork, denying them the chance to recover. Somewhat in support of this, Ragsdale et al., (2011) found that although recovery processes fully mediated the relationship between recovery activities and feeling recovered, mastery experiences were not related to the activities or to recovery quality. However, as Sonnentag and Fritz (2007) point out, mastery experiences can also build resources. If mastery experiences do indeed build resources, then mastery experiences should still be beneficial regardless of the amount of time spent on schoolwork. Thus, I ask the following research question:

Research Question 1: Will participation in mastery activities while not working or going to school contribute to well-being?

Psychological detachment for student-employees also presents a unique situation. That is, in typical recovery research, individuals have one thing from which they are detaching—work. Student employees, however, are dealing with both work as well as school. Cheng and McCarthy (2013) somewhat addressed this in their study in which they looked at the competing demands of school, work and family. However, in assessing psychological detachment, they assessed it as a unitary concept—that is, detachment from all responsibilities. Although they did find a relationship between psychological detachment and job satisfaction, their study does not shed light on whether detachment from school and work are equally important.

In recovery studies, the impact of daily psychological detachment is often studied to consider within-person effects, but psychological detachment does not always exhibit consistent effects on well-being across such studies. For example, Sonnentag and Binnewies (2013) found that negative affect (a measure of well-being) at bedtime was related to the level of psychological detachment experienced after work, but this was not the case for positive affect, and psychological detachment was unrelated to either positive or negative affect the following morning. Similarly, Mojza, Sonnentag, and Bornemann (2011) found that psychological detachment was unrelated to positive affect at work the next day, and Sonnentag et al., (2008) found that psychological detachment was unrelated to next morning positive affect, although mastery experiences were. However, Sonnentag et al. (2008) did find that psychological detachment was related to next morning negative affect and fatigue, and relaxation was related to next morning serenity. Despite the lack of impact of psychological detachment on positive affect described above, Feuerhahn et al., (2014) found psychological detachment to be

positively related to evening positive affect. Additionally, when looking at the influence of psychological detachment on end of week positive affect and negative affect, Sonnentag, Mojza, Binnewies, and Scholl (2008) found psychological detachment to be related to higher positive affect and lower negative affect. Thus, although contradictory findings exist, psychological detachment does show a relationship with well-being in various circumstances. For students, given that both school and work have a significant role in the lives of individuals, it is likely that detachment from both roles will impact well-being, leading to the following hypothesis: *Hypothesis 2: Detachment from (a) school and detachment from (b) work while neither working nor going to school will both lead to increased well-being.*

Recovery During Work and School

In typical recovery research, individuals studied are often full-time employees, and their time after work is assessed with regards to how it contributes to recovery and well-being. However, for student-employees, their days are not so neatly structured. That is, their time for recovery could be in the morning, in that they may have an afternoon full of classes and then may have a part-time job in the evening. Alternatively, they may have virtually no time apart from school and work, spending all day either in class, studying and going to work. Although for such individuals it may seem that they do not have any recovery time, this may not necessarily be the case. That is, their time at work may actually serve as an opportunity to recover from school, with school potentially providing an opportunity to recover from work. For example, an individual may be enrolled in a grueling engineering program, and also may be employed as a janitor. Although the individual is always working or doing schoolwork,

her time working as a janitor may give her a chance to detach psychologically from the demands of school and recover those cognitive resources that were depleted. Thus, focusing on recovery processes for just that period of time in which individuals are not doing schoolwork or at their job may not provide the full picture of the recovery that is occurring. However, to my knowledge this has never been explored in the context of school and work. The idea, however, is not new, as Etzion et al. (1998) found that reservist service in the armed forces could serve as a time for recovery.

Although it is possible, as discussed, that recovery processes provide the same benefit whenever they are experienced (that is, on the job, at school, etc.), another possibility is that things like detachment and mastery are only beneficial when done on one's "own" time, and when not constrained by the demands of externally mandated requirements (such as those required by school or work). For example, the engineering student alluded to earlier may indeed be detaching psychologically from school while working as a janitor. However, this psychological detachment may not contribute to her well-being given that she still is under pressure to perform other duties, and consequently her self-regulatory resources may continue to be depleted (cf. Trougakos & Hideg, 2009). Although this may be the case, given the robustness of the benefits of psychological detachment in past recovery research (Bennett et al., under review), I hypothesize the following:

Hypothesis 3a: Engaging in psychological detachment from school while at work will explain additional variance in well-being beyond that explained by psychological detachment from school while neither at school or work.

Hypothesis 3b: Engaging in psychological detachment from work while at school will explain additional variance in well-being beyond that explained by psychological detachment from work while neither at school or work

Regulatory Focus

An additional variable that likely influences the well-being of students and their recovery behavior is regulatory focus. Higgins (1997) proposed that individuals differ in the extent to which success or failure motivates them. That is, he suggested that some individuals can be characterized as having a promotion focus, in which they are motivated to gain positive outcomes. He also suggested that some individuals can be characterized as having a prevention focus, in which they are motivated to avoid negative outcomes. The extent to which individuals are motivated by one or the other (or both) is called regulatory focus.

A construct similar to regulatory focus is approach/avoidance temperament. Approach temperament refers to being especially vigilant to and focused on positive stimuli, while avoidance temperament refers to being especially vigilant to and focused on avoiding negative stimuli (Elliot & Thrash, 2002). Regulatory focus is fairly strongly correlated with approach/avoidance motivation (Elliot & Thrash, 2010). In their meta-analysis of the regulatory focus literature, Lanaj et al., (2012) found that prevention focus was positively related to various indicators of avoidance temperament, such as negative affectivity, neuroticism and performance-avoidance goal orientation. However, although regulatory focus and approach/avoidance motivation may seem to be the same construct theoretically, one way that Elliot and Thrash (2010) differentiated regulatory focus from approach/avoidance temperament was by suggesting that

approach and avoidance temperament are a result of biology, while regulatory focus is based in socialization. Regarding how regulatory focus and approach/avoidance orientation complement each other, Higgins (1997) suggests that when individuals have a promotion focus and are focused on attaining "aspirations and accomplishments" (p. 1282) they tend to use approach strategies, while when they have a prevention focus and are focused on "responsibilities and safety" (p. 1282), they tend to use avoidance strategies. Along these lines, Higgins (1997) posits that promotion focused individuals are more concerned with errors of omission, while prevention focused individuals are more concerned with errors of commission. Furthermore, he suggests that regulatory focus influences the types of emotions individuals feel. That is, he points out that individuals high in promotion focus are more likely to feel cheerfulness when achieving positive outcomes and dejection when not achieving the desired outcomes. Alternatively, he suggests that individuals high in prevention focus feel calm when avoiding negative outcomes (that is, when achieving their goal of avoiding bad outcomes), and feel agitation when failing to avoid the negative outcomes.

In some ways, the difference between prevention focus and promotion focus may appear to be simply semantics. That is, whether an individual is trying to get an A in a class to get into a good graduate school or to avoid losing her scholarship, she may be equally focused on getting the A. However, the two foci have been shown to be "mostly orthogonal" and have different outcomes (Lanaj et al., 2012, p. 1008). For example, in a recent meta-analysis of the regulatory focus literature, Lanaj et al., (2012) found that promotion focus is associated with increased job performance, higher satisfaction, and a greater number of organizational citizenship behaviors while

prevention focus is unrelated to job performance, is negatively related to job satisfaction and is unrelated to organizational citizenship behaviors.

As mentioned previously, few studies look at the impact of regulatory focus through the lens of occupational health psychology. However, Lin and Johnson (2015) did find that prevention focus was significantly correlated with depletion and related indirectly to depletion through prohibitive voice. After pointing out the positive outcomes of approach goals, they said, citing Carver and Scheier (1998), "In contrast, feared and ought goal-states divide people's attention between all of the obstacles that might arise and the various ways in which failure is possible. This is especially depleting because people's resources are spread thin as they try to anticipate and prevent all possible threats, regardless of whether they are real or not" (p. 4). Given these depleting effects, I hypothesize the following:

Hypothesis 4: Higher prevention focus is related to increased exhaustion and overall worse well-being

In addition to having main effects on the well-being of individuals, regulatory focus also likely influences the extent to which an individual engages in recovery processes. Individuals who are higher in prevention or promotion focus are more concerned with avoiding failure or achieving success, respectively, than those with lower levels of either prevention or promotion focus. Considering their focus on achieving their desired outcome, it will likely be more difficult to detach for individuals higher in either focus than their peers with less motivation[3]. For example, when they

[3] Sonnentag and Fritz (2007) made a similar argument when hypothesizing the relationship between conscientiousness and detachment and between relaxation and detachment. However, she did not find support for her hypothesis.

are not working on schoolwork, such individuals are likely going to be thinking about what they could be doing or should be doing. For many jobs, this could also be the case. However, the extent to which regulatory focus is related to psychological detachment is likely a function of the extent to which success is dependent on doing things outside of regular working hours. That is, for students, there is always more studying that can be done. However, for the majority of jobs students hold, which often include jobs in service industries such as restaurants and retail, little can be done outside of work to improve performance. Given the lack of outside-of-work tasks to be done to either be successful or avoid failure, the relationship between psychological detachment from work and regulatory focus will likely not be as strong, but will still be present.

Hypothesis 5a: Prevention focus will be negatively related to psychological detachment from school

Hypothesis 5b: Promotion focus will be negatively related to psychological detachment from school

Hypothesis 6a: Prevention focus will be negatively related to psychological detachment from work

Hypothesis 6b: Promotion focus will be negatively related to psychological detachment from work

Just as individuals high in prevention focus are likely to engage in low levels of psychological detachment, their level of prevention focus may also influence their engagement in relaxation. Given the vigilance that individuals who are high in prevention focus have in avoiding negative outcomes, such individuals also likely will have a difficult time relaxing. Similarly, an individual who has a high level of

promotion focus—and consequently a strong focus on seeking out positive outcomes—may also have a more difficult time relaxing. However, the relationship between relaxation and promotion focus may be tempered by other variables. The reason for this is that, in seeking out positive outcomes, an individual who is high in promotion focus may have a strong focus on getting good grades or advancing in his or her current job, which could lead to that individual having a harder time relaxing during off time, due to that focus on excelling potentially preventing him or her from being able to 'let go'. However, the individual could also be focused on maximizing positive outcomes in other ways, such as well-being. For such individuals, they may view relaxation as a way to gain those positive outcomes they seek. This leads to the following hypothesis and research question.

Hypothesis 7: Prevention focus will be negatively related to engagement in relaxation activities

Research Question 2: Will promotion focus be related to engagement in relaxation activities?

The relationship between mastery experiences and regulatory focus likely depends on multiple moderating variables. For example, given that mastery experiences include seeking out intellectual challenges and learning new things, the extent to which promotion and prevention focus are related to mastery experiences likely depends on interests, attitudes and values. For example, an individual who is high in prevention focus and worries about health may use her leisure time to learn more about taking better care of herself (cf. Uskul, Keller, and Oyserman, 2008), which could be viewed as a mastery experience. Conversely, someone high in prevention

focus who is concerned about being unemployed after graduation may utilize his or her leisure time looking at job postings and networking, which is not as directly related to the construct of mastery experiences. Given the potential multitude of moderating variables, I pose the following research question:

Research Question 3: Will a) prevention focus and b) promotion focus be related to engagement in mastery activities?

Prevention focus is also likely to interact with psychological detachment. When such individuals are failing to psychologically detach, the reason for not detaching is likely driven, at least in part, by a constant focus on what could go wrong. That is, when an individual who is high in prevention focus is spending time with friends relaxing yet is thinking about school (and thus is failing to detach), the individual may be thinking that by spending time relaxing he is losing time he could be studying, and consequently is more likely to fail. The lack of psychological detachment for such an individual may be particularly damaging, and conversely the benefit of detaching psychologically would likely be particularly strong for that individual. This type of interaction, where certain individuals benefit more from recovery than others, was found by Bakker, Demerouti, Oerlemans, and Sonnentag, (2013), who found that individuals higher in workaholism seemed to benefit more from engagement in physical activities (a type of recovery) and seemed to be more negatively affected by engaging in work activities (failing to engage in recovery) than those lower in workaholism. Considering this finding, and given that workaholism is significantly related to having a prevention focus (van Beek, Taris, Schaufeli, & Brenninkmeijer, 2014), I hypothesize the following:

Hypothesis 8: Prevention focus interacts with psychological detachment from a) school and b) work, such that high prevention focus coupled with low psychological detachment is particularly harmful to well-being.

Method

Participants were recruited from introductory psychology classes at a large university in the south-central United States who participated for course credit. To enroll in the study, students were required to have a job. A total of 268 participants provided usable data. Of the participants providing usable data, the average age was 19.09 years and 73.9% were female. On average, students were enrolled in 13.8 credits, and over the course of the study worked an average of 14.1 hours per week and participated in school-related activities for an average of 27.0 hours per week. After signing up for the study, participants were given a link to the general survey with time invariant measures, such as regulatory focus, and were informed of when they would begin to receive daily surveys. Within 1-2 weeks, participants began receiving the daily surveys, which always began on a Monday. The daily surveys arrived for 12 days as part of the formal data collection process, and then were sent for two more days so that those who had missed surveys during the formal data collection process could have a chance to make-up some of them. Of the data used, participants completed an average of 11.0 evening surveys and 9.8 morning surveys (some students completed more than 12 days of data collection, in that they completed some of the make-up surveys even though they did not need to).

The daily evening survey included measures regarding well-being, participation in recovery activities and other questions about that particular day. The morning

measure primarily consisted of measures of sleep and measures of well-being. All data were collected via Qualtrics (an online survey platform), and text-message reminders were sent to participants who requested them[4] to remind them to fill out the surveys, which they could complete on their computers or mobile devices. Using the survey software, each participant was sent a unique link for each survey each day. When the participant completed the survey, the record that was stored by the survey software included an identifier for that individual, thus identifying each survey and allowing for all of the surveys for each participant to be organized together. When participants missed surveys, they were sent periodic reminders letting them know that they had missed surveys and explaining the make-up procedures.

Measures (see Appendix B for all items in measures)

Variables Measured in General Survey

Demographics. Participants indicated their age, gender, details of their employment and education (e.g., their job title, their major, etc.) and the number of credits in which they were enrolled.

Regulatory focus. Regulatory focus was assessed using a slightly modified version of the 18 item measure created by Lockwood, Jordan, and Kunda (2002). The measure consists of two subscales—prevention focus and promotion focus—with half of the items referring to the former and half to the latter. The measure was modified such that the items making reference to academic settings were de-contextualized to refer to all settings. For example, the item "I often worry that I will fail to accomplish my academic goals" was modified to read "I often worry that I will fail to accomplish my

[4] For some participants, their particular phone provider did not allow for text message reminders to be sent using the method used for the study

goals". Participants responded using a 1-9 scale ("not at all true of me" to "very true of me"). Cronbach's alpha was .85 for prevention focus and .91 for promotion focus.

Involvement in School and Work

Involvement in school and involvement in work were assessed using the measure from Kanungo (1982). Participants were asked to respond using a 6-point scale (strongly disagree to strongly agree) to 10 items measuring the extent to which they are involved with their job and 10 items measuring the extent to which they are involved in schoolwork. A sample item from the job involvement measure was "I am very much involved personally in my job". For the involvement in school measure, questions were adapted to measure involvement in their coursework and classes that semester. That is, the complementary item to the job involvement item given earlier was, "I am very much involved personally in my courses and classwork this semester". For measuring involvement in school, two items were removed from the involvement in work measure given that they could not be sufficiently adapted to be appropriate for involvement in school. Cronbach's alpha for the involvement in work and school scales was .87 and .84, respectively.

Daily Measures

Recovery Process Variables

Psychological Detachment. Psychological detachment was assessed in the evening using the 4-item measure created by Sonnentag and Fritz (2007). The measure was slightly altered to create two versions of the measure—one asking about detachment from school (the original measure only asked about detaching from work) and one asking about detachment from one's job (for this study, the word "work" was replaced

in the measure with "my job"). *General detachment from school* and *general detachment from work* were assessed by asking participants to indicate their level of detachment while not at work or doing school-related activities (such as going to class or doing homework). Participants were asked to respond using a 1-7 scale (strongly disagree to strongly agree). Sample items for detachment from work included "I forgot about my job" and "I didn't think about my job at all". Sample items for detachment from school included "I forgot about school" and "I didn't think about school at all". For days when participants worked at their job, in addition to assessing general detachment from work and general detachment from school, *detachment from school while at work* was assessed by asking individuals to answer the same items used in the general detachment measure, but participants were instructed to respond with regards to the degree to which they detached from school while working at their job. For days when they did schoolwork, participants were asked to indicate their level of *detachment from work while doing schoolwork*, in addition to answering the general detachment from school and work items. For days when participants worked at their job and worked on schoolwork, participants completed all four measures (general detachment from school and work, detachment from school while at work, detachment from work while at school). Cronbach's alpha for general detachment from school and for general detachment from work ranged from .81 to .92[5] and .84 to .92, respectively, when calculated across the different days of data collection. Cronbach's alpha for detachment from school while at work ranged from .85 to .93, when calculated across the days when individuals went to work. Cronbach's alpha for detachment from work while at

[5] For calculating values alpha, listwise deletion was used if there were missing data

school ranged from .86 to .92, when calculated across the days when the individuals went to school.

Mastery Experiences and Relaxation. Each evening, participants indicated the degree to which they engaged in mastery experiences and relaxation activities using the 4-item relaxation measure and the 4-item mastery experiences measure created by Sonnentag and Fritz (2007). The instructions were slightly altered from the original version in that participants were asked to indicate the degree to which they participated in such activities that day while not at their job or doing schoolwork (in the original scale, participants were asked to consider their time after work). Participants were asked to respond using a 1-7 scale (strongly disagree to strongly agree). A sample item from the relaxation scale was "I kicked back and relaxed". A sample item for mastery experiences was "I sought out intellectual challenges". Cronbach's alpha for the relaxation scale ranged from .95 to .97 when calculated across the different days of data collection, and from .86 to .93 for mastery.

Well-Being Variables

Vigor. Daily levels of vigor were assessed in the evening and in the morning using a scale created for this study using two items from the vigor scale from the shortened version of the Utrecht Work Engagement Scale (Schaufeli et al., 2006) and two items from the Shirom-Melamed scale (Shirom & Melamed, 2005b). The items were selected to measure general level of vigor, and thus were modified to be context-free, which is why the third item from the UWES was removed ("When I get up in the morning, I feel like going to work"). The instructions and response scale were modified slightly from the original versions to reflect the need to measure how the individual felt at the present

moment. A sample item was, "I feel strong and vigorous". Participants responded using a 1-7 response scale (strongly disagree to strongly agree). Cronbach's alpha for the scale ranged from .89 to .96 for evening vigor and from .90 to .95 for morning vigor when assessed across the days of data collection.

Recovery. Recovery was assessed in the morning and evening. In order to measure daily feelings of recovery, the measure from Sonnentag (2003) was used. As originally written, the measure assessed the degree to which the individual felt recovered, relaxed and in a good mood due to the leisure activities that the individual pursued. The instructions were modified to remove the reference to leisure activities and instead simply asked participants to indicate "how much you agree with the following statements regarding how you feel right now". Participants responded using a seven point scale (strongly disagree to strongly agree)[6]. Cronbach's alpha for the scale ranged from .78 to .88 for evening recovery and from .79 to .89 for morning recovery across all the days of data collection.

Fatigue. Fatigue was assessed in the morning and evening using the physical and cognitive subscales of the Shirom-Melamed Burnout Measure (SHBM) (Shirom & Melamed, 2005a). The SHBM contains three subscales—physical fatigue, emotional exhaustion and cognitive weariness. The physical fatigue subscale has been shown to be strongly related to the exhaustion scale from the Maslach Burnout Inventory in two different samples, with correlations of .74 and .81 (Shirom & Melamed, 2006). Additionally, the cognitive weariness scale (hereafter referred to as mental fatigue) was assessed as an additional measure of negative well-being, given the amount of cognitive

[6] Sonnentag (2003) does not indicate what response scale she used in the study

pressures students face. The instructions of the original scale asked individuals to rate the statements with regards to how they feel at work. However, given the focus of this study on general fatigue, the instructions were altered to ask individuals to simply indicate the extent to which they felt that way at the present moment. The response scale was also adjusted to reflect the daily measurement approach, with participants responding using a seven-point rating scale (strongly disagree to strongly agree). A sample item from the physical fatigue scale was "I feel tired" and a sample item from the mental fatigue scale was "I have difficulty concentrating". Cronbach's alpha for the physical fatigue and mental fatigue scales ranged from .86 to .91 and from .92 to .97, respectively, when calculated across the different days of data collection for evening measurements. For the morning measures of physical and mental fatigue, Cronbach's alpha ranged from .87 to .93 and from .95 to .98, respectively.

Covariates

Daily activities. Participants were asked in the evening survey to report the number of hours that they spent working and doing school-related tasks using an open text box. Participants were also asked to report the specific times during which they were working or doing school-related tasks. If an individual reported "all day" for either, 12 hours was used. For other data that were not clear, the times that the individual reported for that activity (when times were reported) were used to clarify. Additionally, the average hours spent working and going to school each week were calculated by averaging how much time individuals worked and went to school each day, and this value was multiplied by seven to determine the average weekly hours spent on school and work, respectively.

Stressfulness of School/Work. Stressfulness of school and stressfulness of work were assessed in the evening using a modified version of a single item measure used by Watson (1988) to assess perceived daily stress. The question was modified slightly to inquire as to stress they were under caused by school and stress caused by work separately. Participants responded using a 5-point scale ("felt slightly or not at all" to "felt very much").

Sleep. In order to assess time spent sleeping, a single item measure of sleep quantity from the Pittsburgh Sleep Quality Inventory (PSQI) (Buysse, Reynolds, Monk, Berman, & Kupfer, 1988) was used asking the individual to indicate the number of hours spent sleeping (instead of the amount of time in bed). Participants were also asked about their sleep quality from the previous night using a single item from the PSQI. Although the PSQI consists of multiple items, given the daily design of this survey and to avoid fatigue and attrition, a single-item measure was used. A previous study found that the single item, which asks participants to rate the quality of the previous night's sleep overall, correlated .73 with the other items in the PSQI (Hahn, Binnewies, Sonnentag, & Mojza, 2011). Other recovery studies using daily designs have also used this single item (Sonnentag, Binnewies, et al., 2008; Sonnentag & Binnewies, 2013). Participants responded to the item using a 4-point rating scale (very good to very bad), such that higher scores indicate *worse* sleep quality. If participants failed to fill out a morning survey, they answered the sleep questions when they completed the evening survey.

Participants were also asked the time they went to bed and the time they got up, which allowed me to use the time stamp of the surveys to verify that they completed the evening survey before they went to bed, and that they did not complete both the evening

and morning surveys at the same time. Participants were given a text box in which to indicate this. A large portion of students failed to designate "PM" or "AM" when indicating their time, or indicated it incorrectly (for example, writing 2 PM-6 AM, and then indicating 4 hours of sleep). Although it can be assumed for many that "10-6" refers to 10 PM to 6 AM, many students do not have traditional schedules. Various steps were taken to check responses and to ensure data accuracy[7].

Analyses

Hierarchical Linear Modeling (HLM) was used to analyze the data, given that the data were nested (day-level measurements were nested within individuals). Hierarchical linear modeling can be used to analyze many types of nested data, including students being nested in schools, individuals nested in teams, or day-level measurements nested within individuals. In the terminology of HLM, the day-level measurements are called level-1 variables and variables measured only once and which remain constant for individuals (e.g., regulatory focus) are called level-2 variables. Although studies utilizing multiple measures for the same individual at different time points often focus on how the individual changes with time, this is not always the case, especially in studies assessing recovery from work. That is, in studying the impact of recovery from work, the interest is not in how the individual's level of well-being changes from the beginning of the study to the end of the study, but rather the purpose of taking daily measurements and using HLM to analyze those measurements is to assess the variability that exists from day to day in well-being, and whether those variations can be explained by engagement in recovery processes.

[7] For a full description of data cleaning and organization, see Appendix C. For means and standard deviations of all variables, along with intercorrelations of all variables see Appendix D.

Although there are multiple software programs available to test hierarchical linear models, for these analyses, the Proc Mixed program was used in SAS® software (version 9.4). Participants with fewer than two morning and evening observations for any given analysis were excluded from the data[8]. Additionally, any given evening or morning observation was excluded from the analyses if the participant failed to provide data for all four recovery process variables and all four outcome variables. If an observation was excluded for the evening analyses, the corresponding morning observation was also filtered out of the analyses.

For building each model, all level-1 covariates and level-1 predictors were entered into the model, including a fixed as well as a random effect for each variable. After doing this, random effects with a p-value greater than or equal to .1 were removed. Once this was done, parameter estimates were calculated for those hypotheses which did not include level-2 variables. For hypotheses involving level-2 covariates or predictors, the level-2 variables and interactions between level-1 and level-2 variables were then added. For calculating degrees of freedom, the between-within method was used. For modeling the covariances among the random effects, the default method in SAS (Variance Components) was used, in which SAS estimates variances for each random component while not estimating any covariances among random effects. Another frequently used covariance structure among random effects is the unstructured method (UN), in which covariances among all random effects are modeled. However, variance components was chosen given that there was no

[8] Some participants had data for one of the dependent variables but not others for certain days, likely due to carelessness. To be included, participants had to have at least two observations for all morning and evening variables for that set of analyses.

theoretical rationale for modeling covariances among random effects, and given the increased parsimony of the variance components structure. For modeling the structure of the residuals, an autoregressive structure was imposed, in which the residuals of observations close in proximity to one another are modeled as being more strongly related than days further apart (cf. Kincaid, 2005; Singer, 1998). This was chosen given the likelihood that an individual's behavior and well-being on days close in temporal proximity to one another would be more related than days which are far apart[9].

The method of estimation used was full maximum likelihood method for all analyses. This method was chosen because full maximum likelihood is needed to compare models with different fixed effects (Singer, 1998). One disadvantage of using full maximum likelihood, according to Raudenbush and Bryk (2002) is that in models with a high number of regression coefficients, full maximum likelihood can result in significance tests that are too liberal.

In addition to determining the proper modeling of covariance structures, when using level-1 variables, a key decision that must be made is the proper centering method (Enders & Tofighi, 2007). That is, the level-1 predictors can either be left in their raw format, they can be centered around the mean of all participants (typically referred to as grand-mean centering), or they can be centered around an individual's own mean (typically referred to as group-mean centering). If the variable of interest is a level-1 predictor (such as daily levels of detachment), then group-mean centering is needed, as the estimates provided by grand-mean centering are an "uninterpretable" mix of the effects of the level 1 predictor and the effects of the level 1 predictor when aggregated

[9] For a table comparing the fits of the models tested with the different options discussed in this paragraph, see Appendix E.

to level 2 (Raudenbush & Bryk, 2002, p. 139). In discussing the various centering methods, Enders and Tofighi (2007) concur, pointing out that centering at the grand mean produces a mixture of within and between-cluster relationships. They point out that when one is mainly interested in the impact of a level 1 predictor, group mean centering is preferable, which shows how within-person variations in the predictor variable influence the outcome variable. Given that one key aspect of this study is analyzing the impact of daily activities on daily well-being, all analyses focusing on the impact of daily recovery variables, and those looking at interaction effects, utilized "group-mean" centering, in which all dependent variables were centered around the mean for that particular individual. For the analyses of between-subject effects (those assessing the impact of regulatory focus), grand-mean centering was used.

Results

The first step in testing the hypotheses and research questions was to calculate the intraclass correlation (ICC). That is, prior to conducting HLM, it is important to determine the extent to which the variability that exists in the data is a result of within-person variation (variation in well-being from day to day) versus between-person variation (variation in well-being from one individual to another) which indicates whether the data should be treated as nested. This is calculated using the one-way ANOVA analysis with no predictors except the outcome of interest. In the one-way ANOVA, only the mean level of the outcome variable is modeled for each student. Using this analysis, the amount of variance explained by within-person factors can be compared against the amount of variance attributable to between-person factors, thus indicating whether it is useful to use HLM. The results of the analyses assessing the

ICC values are presented in Table 1, and indicate that variance can be accounted for by both between-individual and within-individual differences. Following these analyses, the level-1 model was built for each outcome variable as specified previously. For all analyses involving well-being outcome variables, covariates included hours spent working on schoolwork, hours spent at one's job, daily stress caused by school, daily stress caused by work, the number of hours of sleep from the previous evening and the quality of sleep from the previous evening. For the outcome variables measured in the morning, the length of time between waking up and taking the survey was included as an additional covariate, given that an individual taking the survey immediately upon waking likely would have a different level of well-being than after being awake for a few hours. Additionally, any responses that occurred more than four hours after the individual reported getting up were removed from the analyses.

Importance of Recovery Processes

Hypotheses 1 and 2 and Research Question 1 asserted or questioned the relationship between recovery activities and well-being. Specifically, Hypothesis 1 predicted that higher levels of relaxation would be related to increased well-being. This hypothesis was supported, given the strong relationships between relaxation and evening vigor (β = .21, SE = .03, $t(2671) = 6.77$, $p < .0001$), recovery (β = .40, SE = .03, $t(2671) = 13.80$, $p < .0001$), physical fatigue (β = -.25, SE = .03, $t(2671) = -8.04$, $p < .0001$) and mental fatigue (β = -.18, SE = .03, $t(2671) = -5.77$, $p < .0001$) (see Tables 2 and 3 for all parameter estimates). A lagged effect of relaxation was also found for well-being measured the following morning for vigor (β = .07, SE = .03, $t(2348) = 2.32$, $p = .020$), recovery (β = .14, SE = .03, $t(2348) = 4.66$, $p < .0001$), and physical fatigue (β = -.08,

SE = .03, $t(2348) = -2.91$, $p = .004$). However, the lagged effect of relaxation was not found for morning mental fatigue (β = -.03, SE = .03, $t(2348) = -1.05$, $p = .294$). As mentioned previously, predictors were mean centered around each participant's average level of that predictor (in this case, average levels of relaxation). Consequently, this means that individuals had higher levels of well-being on days when they engaged in higher levels of relaxation *relative to their own mean level of relaxation* during the study.

Research Question 1 asked whether increased participation in mastery activities was related to increased levels of well-being. The answer to this research question was a resounding yes, with engagement in mastery activities being related to evening levels of vigor (β = .22, SE = .03, $t(2671) = 7.19$, $p < .0001$), recovery (β = .23, SE = .03, $t(2671) = 8.20$, $p < .0001$), physical fatigue (β = -.13, SE = .03, $t(2671) = -4.35$, $p < .0001$), and mental fatigue (β = -.08, SE = .03, $t(2671) = -2.43$, $p = .015$). As with relaxation, a lagged effect was also found for well-being measured the next morning, such that increased levels of engagement in mastery processes (relative to an individual's own mean level of engagement in mastery processes throughout the study) were related to higher levels of morning vigor (β = .07, SE = .03, $t(2348) = 2.26$, $p = .023$), recovery (β = .11, SE = .03, $t(2348) = 3.22$, $p = .001$), and mental fatigue (β = -.09, SE = .04, $t(2348) = -2.42$, $p = .016$). Engagement in mastery activities was not related to morning physical fatigue (β = -.03, SE = .03, $t(2348) = -.93$, $p = .351$).

Hypothesis 2a predicted that increased levels of general school detachment would be related to increased well-being. For the most part, this hypothesis was unsupported, given that no relationship was found between general school detachment

and vigor, physical fatigue and mental fatigue for both evening and morning measurements. However, general school detachment was related to both evening recovery (β = .08, SE = .03, $t(2671) = 2.36$, $p = .018$), and levels of recovery measured the following morning (β = .07, SE = .03, $t(2348) = 2.09$, $p = .037$).

Hypothesis 2b predicted that higher levels of general work detachment would be related to higher levels of well-being. This hypothesis was completely unsupported. Indeed, for some well-being variables the opposite effect was found, as detachment from work was negatively related to morning vigor (β = -.11, SE = .04, $t(2348) = -2.95$, $p = .003$) and marginally positively related to evening levels of mental fatigue (β = .08, SE = .04, $t(2671) = 1.83$, $p = .067$). Thus, for these variables, individuals had lower levels of well-being on days when they detached from work more, even after controlling for stressfulness of school and work and hours spent at school and work.

Hypotheses 3a and 3b asked whether detachment from school *while at work* and whether detachment from work *while at school* contributed additional variance beyond that of the other recovery variables. Given the nature of the variables, they were only measured on days when the individual went to work or school, respectively. There were many days in which participants went to school but did not work, and also days when the participants worked without spending time on school-related tasks. Thus, simply adding these detachment variables into the previous analysis would have been inappropriate. Additionally, one of the reasons that general school detachment and general work detachment were not significantly related to well-being may have been that days on which the individuals did not participate in the respective activity were included in the analyses; it may be that detachment only matters when the individual

has participated in the activity from which he or she is detaching (for example, detachment from school may only be important for an individual on a day that he or she participated in schoolwork). Indeed, many studies measuring detachment from work only include days when the individual worked (e.g., Bakker et al., 2013; Bono, Glomb, Shen, Kim, & Koch, 2013; Mojza et al., 2011; ten Brummelhuis & Trougakos, 2014, although see Meier, Cho, & Dumani, 2016 for an exception). Thus, to determine whether detachment from work while at school and detachment from school while at work are important, the analyses were conducted only with those days on which the individuals went to school or work, respectively.

In order to test whether detachment from work while at school explained a significant amount of additional variance beyond the variables already included in the previous analyses, the change in deviation scores was assessed. The deviance is calculated as two times the negative log-likelihood, with the difference in deviance scores from the two models following a large-sample χ^2 distribution whose degrees of freedom equals the extra parameters from the more complex model (Raudenbush & Bryk, 2002). As mentioned previously, only days in which the individual did some form of schoolwork were assessed, and individuals were only included if they provided at least two observations for all evening and morning variables measured. This resulted in a total sample of 264 individuals, yielding 2276 and 2094 observations for the evening and morning, respectively, with an average of 8.62 and 7.93 observations per person for the evening and morning, respectively. As before, all level-1 covariates and predictors were entered, modeling both fixed and random effects, with variables

centered around an individual person's mean[10]. Any random effects with significance values less than .1 were retained.

The change in deviance from adding detachment from work while at school was non-significant for the majority of all well-being outcomes. However, there were some outcomes for which detachment from work while at school explained a significant amount of incremental variance, as indicated by a significant change in deviance score (see Tables 4 and 5 for all parameter estimates). The change in deviance for morning recovery was significant, as was the fixed effect of detachment from work while at school for morning levels of recovery ($\beta = .09$, SE = .04, $t(1818) = 2.12$, $p = .035$). The same was also true for evening levels of physical fatigue, although in the opposite direction as expected ($\beta = .10$, SE = .04, $t(2001) = 2.39$, $p = .017$). The change in deviance score was also significant for evening levels of mental fatigue. However, the fixed effect for detachment from work while at school was not significant for mental fatigue (see Tables 4 and 5 for all parameter estimates). Thus, Hypothesis 3b was mainly not supported.

In addition to determining whether the addition of detachment from work while doing school-related tasks explained incremental variance, the fixed effects of the other recovery variables were also assessed only on days when the participant completed schoolwork, to see if there was a difference from the analyses using all days. As shown in Tables 4 and 5, results largely paralleled those of the analysis with all days. Specifically, higher levels of relaxation and mastery were both significantly related to

[10] For all analyses using data from only certain days, mean centering was accomplished by calculating the mean for only those specific days used in the analyses and creating the mean-centered variables using that mean.

higher levels of well-being and general school detachment showed some relationship with well-being. General work detachment, however, was not related to any well-being outcomes.

The same procedure was followed for assessing the importance of detaching from school while at work, but analyses only included days when the individual worked, using only individuals with at least two evening observations on days they worked and two morning observations from the day after they worked. This resulted in a sample size of 235 individuals, yielding a total of 1192 and 1091 evening and morning observations, respectively, with an average of 5.07 and 4.64 evening and morning observations per person, respectively. The change in deviance when adding detachment from school while at work to the original model was significant for evening vigor, evening physical fatigue and morning mental fatigue. However, the fixed effects for detachment from school at work were only significant for evening levels of mental fatigue (β = -.11, SE = .06, $t(946)$ = -1.99, p = .047), which was in the predicted direction. Thus, there was some support for the hypothesis that detachment from school while at work explains additional variance beyond that explained by the other recovery variables, but because only one of the fixed effects was significant of the three significant changes in deviance scores, the specific impact of detachment from school while at work remains somewhat unclear.

In comparing the results of the other recovery variables only on work days to the results obtained when looking at all days, once again, the results were fairly consistent (see Tables 6 and 7). That is, both relaxation and mastery were significantly related to all four well-being outcomes when measured in the evening, and both did show lagged

effects, although not for all well-being variables, while general detachment from school showed some positive relationships with well-being, and general work detachment showed one negative relationship with well-being.

One additional possibility is that detachment is only important on days when the individual goes to work and works on his or her studies. On such days an individual's actual recovery time may be nonexistent, meaning that the time at school is the only time to recover from work and vice versa. In order to test whether this was the case, only days on which individuals studied *and* went to work were assessed. Data were only analyzed for participants with at least two evening and two morning observations with data for all study variables. This resulted in a total sample size of 207, yielding a total of 963 and 899 evening and morning observations, respectively, with an average of 4.65 and 4.34 evening and morning observations, respectively. The change in deviance scores after adding both detachment from work while at school and detachment from school while at work were significant for evening vigor, morning vigor, morning recovery, and morning physical fatigue (see Tables 8 and 9). However, when assessing the fixed effects for detachment from work while at school and detachment from school while at work, the only significant fixed effects were detachment from school while at work for morning physical fatigue (β = -.13, SE = .06, $t(679) = -2.29$, $p = .022$) and for evening mental fatigue (β = -.15 , SE = .06, $t(744) = -2.29$, $p = .023$). There was also a marginally significant lagged effect of detachment from school while at work on morning vigor. The only effect for detachment from work while at school that was even approaching significance was detachment from work while at school and evening physical fatigue, which once again was not in the predicted direction (β = .12, SE = .06,

$t(744) = 1.90$, $p = .057$). The other fixed effects are similar to the results from analyses looking at all days, days when individuals worked, and days when individuals went to school (see Tables 8 and 9 for parameter estimates). Thus, there was some support for Hypothesis 3a, which predicted that detachment from school while at work would explain additional variance in well-being beyond the other recovery variables, but very little support for Hypothesis 3b.

As stated in the method section, students could participate in the study as long as they had a job. However, the possibility exists that recovery is only important for students who work a certain number of hours. For example, a student enrolled in 10 credits who works 4 hours per week may simply not need to recover, given that neither role may be all that depleting. Despite the fact that I controlled for the number of hours an individual worked each day, a student who is working a large number of hours each week may simply be qualitatively different than those who barely work at all. Consequently, I re-ran the analyses for those who were at or above the median number of hours worked per week (13.4) and who also were enrolled in at least twelve credits, which the university defines as full-time status. Parameter estimates for these analyses are presented in Appendix F, but a summary of significant findings across both sets of analyses is presented in Table 10. The results largely match the results from the analyses described previously in which all participants were included.

Regulatory Focus

The next set of hypotheses dealt with the influence of regulatory focus on well-being and detachment. In order to test Hypothesis 4, which predicted that higher levels of prevention focus would be related to worse well-being, models were tested for each

of the well-being outcomes. As was done previously, all level 1 predictors and covariates were added to the model, and random effects with a p-value less than .10 were retained. The same covariates that were used previously were used again (hours of school and work, stressfulness of school and work, sleep quantity and quality). However, whereas previously all level-1 variables were centered around the individual person's mean, for these analyses all level-1 variables were grand-mean centered (that is, centered around the mean of all individuals). Enders and Tofighi (2007) explain that when a level-2 variable is of interest and there are level-1 covariates, grand mean centering should be used, given that when level-1 variables are group-mean centered they do not actually account for any variance in level-2 variables due to the different levels being orthogonal. Whereas the previous hypotheses focused on the impact of specific daily activities (and thus focused on the day level), the focus of this analysis was on the impact of a person-level variable (a level-2 variable), meaning it was important to covary out the influence of person-level covariates.

As the first step in the analyses, all level-1 covariates were added, non-significant random effects ($p \geq .1$) were excluded, and then prevention focus was added. Prevention focus had a significant relationship with both negative well-being indicators when measured in the evening (Physical Fatigue: $\beta = .08$, SE = .03, $t(266) = 2.38$, $p = .018$, Mental Fatigue: $\beta = .09$, SE = .04, $t(266) = 2.13$, $p = .034$), but was unrelated to the positive evening well-being variables (Vigor: $\beta = -.01$, SE = .03, $t(266) = -.27$, $p = .787$, Recovery: $\beta = -.02$, SE = .03, $t(266) = -.67$, $p = .503$). For morning well-being, however, prevention focus was significantly related to all well-being outcomes except for recovery (Vigor: $\beta = -.11$, SE = .04, $t(266) = -2.97$, $p = .003$, Recovery: $\beta = -.04$, SE

= .03, $t(266) = -1.33$, $p = .184$, Physical fatigue: $\beta = .13$, SE = .04, $t(266) = 3.57$, $p = .0004$, Mental fatigue: $\beta = .15$, SE = .04, $t(266) = 3.45$, $p = .001$). The change in deviance from adding prevention focus to the model paralleled the findings from the fixed effects, in that whenever a fixed effect was significant for prevention focus, the change in deviance score was also significant (see Tables 11 and 12).

Hypotheses 5-7 and Research Question 2 predicted and asked about the relationship between regulatory focus and engagement in recovery activities. In order to test these, a similar process as was used previously was employed. However, for these analyses, rather than using the well-being variables as the outcome variables, engagement in each recovery process was the outcome variable. ICCs indicated that the data should be treated as nested (see Table 13). Following testing of the ICCs, grand-mean centered covariates were added to the model. Covariates included hours at school and work, stressfulness of school and work and also involvement in school and involvement in work. The stressor-detachment model proposed by Sonnentag (2010) suggests that stressfulness not only impacts well-being, but also engagement in detachment which is why stressfulness of work and school were included. The involvement variables were added because the extent to which individuals are involved in school or work may influence their ability and willingness to detach and engage in other recovery activities (Sonnentag & Fritz, 2015).

After adding the grand-mean centered level-1 covariates and removing the random effects whose significance level was .10 or greater, grand-mean centered involvement in school and work were added as level-2 variables, followed by adding grand-mean centered prevention and promotion focus as level-2 variables. The change

in deviance scores was calculated to compare the fit of the models with all variables to the fit of the models with all variables except the regulatory focus variables.

For the recovery process of detachment, results showed that detachment from school and detachment from work were mostly unrelated to prevention and promotion focus, regardless of the type of detachment (detachment from school while not working or going to school, detachment from school while at work, etc. See Tables 14-17 for all parameter estimates). This was also true regardless of the days analyzed (that is, whether looking at all days, whether looking just at days the individual went to school, just days the individual worked, or just days the individual went to school and worked). The only exceptions to this were only marginally significant, and all in the opposite direction as expected, in that increased levels of prevention and promotion focus were related to higher levels of detachment from work. As was done previously, the data were also assessed for only those full-time students who worked at least 13.4 hours per week or greater (see Appendix F for parameter estimates). Across those analyses, prevention focus was neither significantly nor marginally significantly related to detachment. However, promotion focus was significantly related to general work detachment across all days ($\beta = .14$, SE = .05, $t(122) = 2.57$, $p = .011$), across school days ($\beta = .12$, SE = .06, $t(119) = 2.04$, $p = .043$) across work days[11] ($\beta = .13$, SE = .06, $t(117) = 2.00$, $p = .048$) and marginally related to general detachment from work across days when individuals went to school and worked ($\beta = .13$, SE = .07, $t(115) = 1.97$, $p = .051$). Promotion focus was also significantly related to detachment from work while at

[11] The change in deviation from adding the recovery focus variables was not significant when assessing general work detachment across work days, likely due to the fact that the fixed effect for prevention focus was 0.

school for days when individuals worked and went to school (β = .14, SE = .07, $t(115) = 2.12$, $p = .036$), and marginally related to general school detachment across work days (β = .10, SE = .06, $t(117) = 1.67$, $p = .098$)[12]. Once again, results were in the opposite direction as expected, in that higher levels of prevention and promotion focus were related to higher levels of detachment.

In assessing the relationship between regulatory focus variables and engagement in relaxation and mastery processes, results revealed no relationship between mastery activities and prevention focus or promotion focus. However, relaxation was found to be significantly or marginally significantly related to promotion focus across all analyses. That is, relaxation was significantly or marginally significantly related to promotion focus when assessing all days (β = .07, SE = .03, $t(262) = 1.93$, $p = .055$), school days (β = .08, SE = .04, $t(258) = 2.23$, $p = .027$), work days (β = .09, SE = .04, $t(229) = 2.10$, $p = .037$), and days when individuals worked and went to school (β = .09, SE = .05, $t(201) = 1.91$, $p = .058$). In all cases, higher levels of prevention and promotion focus were related to increased participation in relaxation activities, which is the opposite of what was hypothesized.

As done previously, analyses were conducted only for those participants who worked at least 13.4 hours per week. Whereas previously relaxation was related to promotion focus across all participants, relaxation was neither significantly nor marginally significantly related to promotion focus for full-time students working at or above the median number of hours.

Interaction of Regulatory Focus and Detachment

[12] The change in deviation was non-significant.

In order to test Hypothesis 8, which predicted that prevention focus would interact with detachment from school and work to influence well-being, prevention focus and the interaction between prevention focus and detachment from school and work, respectively, were added to the equations used to test Hypotheses 1-3. That is, prevention focus and the interaction terms were added to the final equations used previously. In order to determine whether the interaction terms explained a significant amount of incremental variance, change in deviance was once again calculated, comparing the models with all variables to the models with all variables except the interaction terms. Analyses were conducted for all participants as well as for only the participants who worked at least the median number of hours. Although some of the interactions were significant, given that the vast majority of the interactions were non-significant, it appears that Hypothesis 8 was not supported[13] (see Tables 22-29).

Discussion

The purpose of this study was to determine how recovery functions for student employees, and also to investigate how regulatory focus influences and interacts with engagement in recovery processes. Specifically, by using daily measurements of well-being and recovery, I was able to determine the extent to which daily variations in recovery processes influence daily variations in well-being.

Recovery Processes

In assessing the impact of recovery processes on well-being, the most consistent finding was that engagement in relaxation activities and engagement in mastery

[13] A full description of the interactions, along with probing of significant interactions and interpretations of the interactions is presented in Appendix G.

activities are both strongly related to well-being, both with regards to well-being in the evening as well as well-being the following morning. Both of these findings are consistent with past research and also with theory, although the findings do add to existing theory. That is, as cited previously, the COR model suggests that recovery will be beneficial insofar as it provides an individual with an opportunity to gain resources (or avoid losing resources), and the ER model suggests that recovery processes will be beneficial insofar as they provide a respite for systems that are constantly being taxed. The findings from this study support both of these models, with relaxation providing an opportunity to give a respite to those systems being taxed, in line with the ER model, and mastery experiences providing opportunities to build new resources, in line with COR theory (Sonnentag & Fritz, 2007).

Although there is theoretical justification for mastery experiences contributing positively to well-being, as discussed previously, based on the ER model mastery experiences may not be beneficial for students given that school, for some, could be considered a mastery activity. Thus, students who engage in schoolwork (a mastery activity) and then engage in other mastery activities during their free time may not be providing a respite to those systems used when working on schoolwork, if both are to be considered mastery activities. One potential implication of my findings of the positive effect of mastery activities for students is that if engaging in mastery activities utilizes the same systems as engaging in schoolwork, then any depletion caused by not giving those systems a break is offset by the benefit accrued through gaining resources gained in mastery activities. However, perhaps a more logical explanation is that engaging in schoolwork and engaging in discretionary mastery activities are actually using different

systems. Specifically, engaging in school activities requires a greater amount of self-regulation than engaging in a mastery activity chosen by an individual. Thus, engagement in school activities is likely ego-depleting (cf. Baumeister et al., 1998), while engagement in mastery activities is not.

Although engaging in relaxation and mastery activities may very well have caused higher levels of well-being, there are other explanations for the relationships observed. For example, one possibility is that there is a third variable influencing both engagement in relaxation and mastery as well as well-being. For example, on days that an individual is in a good mood and is particularly worry-free (perhaps because of not having any classes or being scheduled to work), he or she may be likely to engage in relaxation activities. That good mood may carry over to the end of the day and into the following day, resulting in increased well-being. Engagement in relaxation and well-being would therefore be strongly related, but the directionality would be such that well-being influences relaxation.

I attempted to control for this possibility by assessing and controlling for stress caused by school and stress caused by work, along with other factors that might be related to well-being such as sleep variables and hours spent at school and work. When looking at the predictors of engagement in relaxation, I did find that both school stress and work stress were negatively related to engagement in relaxation for most of the analyses, as were hours spent at school and work, suggesting that well-being throughout the day (operationalized in this case as stressors experienced during the day) may be influencing whether or not an individual engaged in relaxation, such that lower well-

being may be causing the individual to engage in less relaxation[14]. Although in all analyses I did include these variables and thus controlled the influence of them, there are likely other similar variables for which I did not control that may be influencing both relaxation and well-being (such as stress caused by monetary issues or relationship issues). However, considering how the results of relaxation align with theory and are significant even while controlling for the variables I did include, it is likely that engagement in relaxation did have some degree of causal effect on well-being.

The same caveats for the findings for mastery activities also hold. That is, an individual having a particularly good day or with lots of free time may be more likely to engage in mastery activities, and that same individual may indicate high levels of well-being that day as well, without engagement in mastery activities playing a causal role in well-being. However, what is particularly interesting about engagement in mastery activities is that the stressfulness of school and stressfulness of work did not seem to impact engagement in mastery activities as much as for relaxation. Thus, the factors that relate to an individual's engagement in relaxation activities (or lack thereof) and engagement in mastery activities seem to be different. However, given that both engagement in relaxation and mastery activities are strongly related to well-being makes their causal role seem more likely.

Another possible explanation, building off the former explanation, for the strength of the relationship between well-being and engagement in relaxation or mastery activities is that there could be a reciprocal effect. That is, individuals may

[14] In these analyses, as mentioned previously, the covariates were centered around the grand mean, making interpretation of level-1 effects somewhat difficult. However, when the analyses were re-run for the full data-set with the covariates centered around each individual's mean, the results were similar. Thus, it seems that the interpretation provided here is appropriate.

already have a high level of well-being, which may increase their likelihood of engaging in relaxation and/or mastery activities, which then contributes to even higher levels of well-being. This is consistent with Fredrickson's broaden and build theory (Fredrickson, 1998). In her theory, Fredrickson proposes that "positive emotions broaden (rather than narrow) an individual's thought-action repertoire…In turn, these broadened thought-action repertoires can have the often incidental effect of building an individual's personal resources, intellectual resources, and social resources" (p. 315). Thus, if an individual is having a good day, he or she may decide to engage in mastery or relaxation, which then helps to replenish resources and contributes to well-being.

The relationship between detachment from school and well-being was also significant in some cases, although not to the same extent that mastery and relaxation were. Interestingly, the lagged effect was more often found to be significant than was the relationship with evening levels of detachment. The reason this is particularly interesting is that evening well-being was measured at the same time as the recovery variables, meaning it is subject to same-source bias which could inflate the relationship causing evening well-being to show stronger relationships with recovery processes than morning well-being, as was seen for mastery and relaxation. For example, on days when individuals worked, detachment from school was not even marginally related to evening levels of mental fatigue ($\beta = .08$, SE = .06, $t(946) = 1.40$, $p = .163$), but was strongly related to morning levels of mental fatigue ($\beta = -.16$, SE = .06, $t(844) = -2.72$, $p = .007$). One potential explanation for this is that by the end of the day, there are many things from that day which may be influencing the individual's levels of well-being, from relationship issues with roommates to extracurricular activities to overall stressors

from the day. The influence of psychological detachment may not be strong enough to be seen through all of such "noise". However, sleep may essentially provide recovery from all of those things and erase their effects, leaving the benefit (or harm) caused by detaching (or failing to detach) from school.

Although significant effects were found for psychological detachment from school, the lack of significant effects is also worth noting. For example, detachment from school was not significantly related to vigor for any analyses. There are multiple possible explanations for my lack of findings. The first explanation is that the majority of past research has specifically assessed detachment from work, with very few studies specifically looking at detachment from school. One exception to this is Ragsdale et al. (2011), who found that detachment from school was significantly related to recovery quality. Ragsdale specifically looked at recovery during the weekend, and she also looked at between-subject effects, as opposed to within-subject effects as were explored in this study. Thus, to my knowledge there are no studies specifically looking at the importance of detachment from school using a within-subjects design[15].

One key difference between detachment from school and detachment from work for full-time employees versus for student employees is the timing of when that detachment happens. In a typical study assessing recovery from work, an individual is

[15] In order to test whether there was a between subjects effect for detachment from school or work, the mean level of the recovery processes across all days of data collection was added to the model. For general school detachment, mean level of detachment was found to be significantly related to higher levels of evening vigor ($\beta = .16$, SE = .08, $t(258) = 2.06$, $p = .040$), but unrelated to the other measures of well-being. Detachment from work while not working or going to school was not significantly related to any of the measures of well-being. Also, it is interesting to note that average level of relaxation was significantly related to evening vigor, evening recovery, and evening as well as morning mental fatigue. Average level of participation in mastery processes was significantly related to evening vigor, morning vigor, and evening recovery. Thus, not only do individuals have higher well-being on days when they engage in more relaxation and mastery activities, individuals who relax more and engage in more mastery activities have higher well-being (for certain indicators) than individuals who do those things less.

asked, at the end of the day, about his or her level of detachment from work after work. Thus, if the individual left work at 5:30 and takes the survey measuring his or her level of detachment at 10:30, then the individual is rating his or her detachment from the previous 5 hours. In this study, however, for any given student, the time during which he or she was not working or doing schoolwork could have been in the middle of the day, with homework being undertaken in the evening. If the duration of benefits accrued from detachment are short, then working on homework in the evening may obscure any benefits that were gained from the midday detachment. Additionally, having a block of time to detach (as in typical recovery studies) may provide different benefits than having an hour here or an hour there to detach, as may be the case for students.

Although somewhat less robust than was expected, overall the findings for psychological detachment from school were in line with expectations. The findings for psychological detachment from work, however, were for the most part opposite from what was expected. Specifically, overall the findings were not very robust (there were many non-significant relationships), but when significant effects were found, in all cases except for one higher levels of psychological detachment from work (either general detachment or detachment from work while at school) were related to lower levels of well-being. One likely reason for the inconsistency between these findings and past research showing the positive impact of detachment from work on well-being (cf. Sonnentag & Fritz, 2015) relates to the fact that participants were, for the most part, part-time employees, for whom psychological detachment from work may function differently. One possible explanation is individuals are detaching as a coping

mechanism given stressful events (Lazarus & Folkman, 1984 as cited in Cheng & McCarthy, 2013). Thus, if an individual has a very stressful day he or she may choose to cope by detaching. Consequently, that stressfulness may be related to lower well-being at the end of the day, which would result in a negative relationship between detachment and well-being. However, in testing whether regulatory focus variables are related to psychological detachment from work, stressfulness of work was included as a covariate and was significantly negatively related to detachment from work[16]. Thus, increased stress is related to decreased levels of detachment, making it unlikely that the explanation above is valid.

Another possible explanation is more closely tied to the fact that the majority of the individuals were employed in a part-time capacity, meaning that an individual's job likely played a lesser role in the individual's life than did school. Indeed individuals were significantly more involved in school than in their jobs (Mean school involvement: 3.81 SD .87, Mean work involvement: 2.96, SD .89, $t(266) = 11.11$, $p < .001$). Additionally, individuals were more able to psychologically detach from work than they were from school (Mean general school detachment: 2.60, SD=.69, Mean general work detachment: 3.50, SD=.71, $t(267) = -18.254$, $p < .001$). Given the lesser role that work played in the lives of individuals, the actual contribution from detaching from work may not have influenced their well-being very much. Thus, whether an individual completely detached or failed to detach, well-being may have been minimally influenced.

[16] This was re-assessed for all participants using group-mean centering, as opposed to grand-mean centering which was used in the original analyses, and the stressfulness of work was still significantly related to general work detachment.

Consequently, the reason that psychological detachment showed some negative relationships with well-being may have been due to a third variable that was not measured. For example, one factor that may influence an individual's detachment from work is the number of other negative events in his or her day. If an individual has roommate troubles or car trouble or experiences other stressors, he may completely forget about his job. Thus, the level of detachment from work may be influenced by negative events, which may influence well-being. This would result in a negative relationship between detachment from work and well-being, as I found. Although I controlled for stressfulness because of school and stressfulness because of work, there may be other factors influencing their stress levels and overall well-being levels for which I did not control that may be influencing the negative relationship between detachment from work and well-being. However, all of these explanations should be considered in light of the fact that not all well-being variables were negatively related to detachment from work. Thus, as previously mentioned, the negative relationship is not very robust.

One of the ways this study contributes to the current research on detachment from work is by looking at whether psychological detachment from one domain can occur (and be beneficial) while engaging in other work in another domain. Specifically, I looked at whether psychological detachment from work during school and psychological detachment from school during work can be beneficial. Although many of the analyses looking at the importance of detachment from school while at work yielded non-significant results, there were various significant effects suggesting that there seems to be some benefit from detaching from school while at work. There seems

to be little to no benefit from detaching from work while at school, however, given that of the two significant effects, one showed detachment positively related to well-being and the other showed it to be negatively related. One particularly interesting finding, though, regarding the significant effects is that there was no alignment between detachment from school while at work and general detachment from school. That is, analyses in which detachment from school while at work was significantly related to increased well-being did not show the same effect for detachment from school while not at work or at school. The same was true for detachment from work while at school. It seems, then, that detachment while at work or school functions differently than detachment while not at work or school.

Although my findings do shed light on whether individuals can detach from school while at work and vice versa, perhaps a more important question is whether this is necessarily desirable for working students. McCormick, Moore, and Kuh (2010) suggest that work and school should complement each other. They write, "The goal is to make faculty, advisors, and student life professionals full partners in helping students connect curricular and cocurricular experiences with student employment" (p. 205). Thus, if an individual is able to fully detach from school because his or her job is so vastly different from his or her schoolwork, then ultimately the job may be detrimental given that it is not furthering that student's education. In a similar vein, Lynch, Gottfied, Green, and Thomas, (2010) suggest that more should be done to bring into the classroom the experiences of working students.

Regulatory Focus

The other main part of this study was looking at the importance of regulatory focus, and especially the interaction of regulatory focus with recovery variables. Overall, the results suggest, as was predicted, that prevention focus would be negatively related to well-being. However, it appears that this is mainly only true for measures of negative well-being. That is, of the positive well-being indicators, the only one that was related to prevention focus was morning vigor, while prevention focus was related to physical fatigue and mental fatigue, both in the morning and evening. In reviewing the well-being literature, Sonnentag (2014) highlights research showing that positive and negative well-being have different indicators, and these findings provide additional support for that.

In looking at whether regulatory focus variables are related to engagement in recovery processes across all participants, contrary to what was predicted, there was little relationship between regulatory focus variables and detachment from school and work. The only exceptions were only marginally significant, and were in the opposite direction as hypothesized. Also, they were all for detachment from work which, as explained above, seems to have little influence on well-being. It is particularly interesting that prevention focus seems to be unrelated to detachment from school but shows some relationship with detachment from work, albeit a small one. Given the nature of student jobs, which make it easier to "leave work at work" since students typically are not working desk jobs where they may have to take their unfinished work home with them, there may be limited benefit accrued from continuing to focus on work when not at work. However, for school there can always be more studying or more thought put into school, meaning there is a potential benefit from failing to detach.

Thus, it would seem that of the two domains (work and school), regulatory focus should have been related to school detachment. What is also particularly notable is that the marginally significant results were in the opposite direction as expected, with individuals higher in either prevention or promotion focus doing more detaching. Indeed, nearly all results for prevention and promotion focus were in the positive direction when looking at both significant and non-significant results. For full-time students working at or above the median number of hours, given that detachment from work while at school was significantly related to promotion focus, one potential explanation is that individuals higher in promotion focus are more attentive to maximizing gains at school and thus are more fully able to detach from work.

Although regulatory focus showed a fairly small relationship with detachment from school and work when assessing all participants, and showed no relationship with participation in mastery activities, it did show somewhat of a consistent relationship with relaxation activities. Across all four types of analyses for the full data set (all days, school days, etc.), promotion focus was either significantly or marginally significantly positively related to engagement in relaxation activities (prevention focus was also marginally related to relaxation for two of the analyses). However, this relationship disappeared when only considering the individuals working at least the median number of hours and enrolled full time in classes. One possible explanation for this is that individuals high in promotion focus may engage in relaxation when they have discretionary time, but when discretionary time is lacking (as it likely is for individuals working over 13.4 hours per week) promotion focus does not influence engagement in relaxation activities. Thus, the situation may be determining the extent to which these

personality differences are influencing behavior (cf. Mischel, 1977). It is also interesting to note that, whereas promotion focus does not show a very strong relationship with detachment from work when looking at all individuals, promotion focus was significantly related to detachment when looking at individuals working at least 13.4 hours per week. Thus, when dealing with limited time, individuals high in promotion focus seem to be focusing on things other than work when not at work (although, based on the other findings described previously, this may not lead to increased well-being).

Interaction between Regulatory Focus and Detachment

The hypotheses regarding the interaction between regulatory focus and detachment from school produced mixed support and ultimately some perplexing findings. However, given that the majority of the interactions were not significant (there were a total of 192 interactions tested and only 16 were significant at the $p < .05$ level), the main conclusion regarding the interaction analyses is that prevention focus does not seem to interact with detachment from school and detachment from work to influence well-being. Considering the number of analyses run, there is definitely a potential concern for alpha inflation.

Ultimately, there could be many reasons why more support was not found for the hypotheses related to prevention focus. One potential reason is that for individuals high in prevention focus, any benefits accrued by detaching are offset by increases in things like rumination following detachment from school. For example, an individual who is high in prevention focus who watches a book for fun and detaches completely from school may afterwards have increased levels of stress due to a worry about time

that was lost from studying or working on homework. That is, the individual may think to herself, "Because I read that book, I now have a higher chance of failing my test tomorrow", thus essentially nullifying any gain made from that time of detachment. Given that prevention focus was not significantly related to detachment, it doesn't seem that individuals higher in prevention focus are detaching less, but there is a possibility that they just do not always benefit from detachment. However, given that the significant interaction effects align with the hypotheses, it seems that there may be some benefit gained from detaching for those high in prevention focus. For potential explanations for the pattern of significant findings, see Appendix G.

Future Research and Practical Implications

Given how robust the findings were for the importance of engaging in mastery activities and relaxation, one key practical implication for this study may be that university administrators who want to increase the well-being of student-employees should find ways to encourage engagement in mastery activities and relaxation activities. However, although university administrators do care about the well-being of their students, they are also concerned about the development of the students and their preparation for gainful employment in their field of choice. Thus, future research is needed to determine whether engagement in relaxation and mastery activities is related to things like GPA and length of time to graduate. McCormick et al. (2010) found that engagement in school seemed to mediate the relationship between working and GPA, and thus the extent to which the recovery processes we measured influence school engagement may result in recovery positively impacting GPA. However, although some students may appreciate being encouraged to take more time to relax, if such

admonitions ultimately result in students neglecting their studies, then in the long run it will have detrimental effects.

The findings of this study also suggest that university administrators may be well-served by implementing some type of training program to help students increase their ability to psychologically detach from school. However, given the equivocal and negative findings for detachment from work, it does not seem that a training program for that would be beneficial. However, before implementing any sort of university-wide program to encourage psychological detachment or engagement in relaxation or mastery activities, future research is needed to determine whether such training programs are effective. Regardless of whether training programs are implemented, it is important for university faculty and staff to acknowledge the need for students to work and to try and create ways to facilitate it, as asserted by McCormick et al. (2010).

Past research on recovery interventions has shown mixed support. For example, Hahn, Binnewies, Sonnentag, and Mojza (2011) conducted training aimed at educating individuals on the importance of engagement in psychological detachment, relaxation, mastery and having control over one's recovery experiences and helping them to set goals and do other things to increase their engagement in such activities. They found that their training program did increase individuals' engagement in such activities (at least in the short term), and also found increases in well-being at one of the time points studied. However, other interventions focused on recovery experiences have met with less success. For example, Meier, Cho, and Dumani (2016) found that positive work reflection predicted multiple indicators of well-being. However, when the researchers randomly assigned individuals to an intervention condition in which they were asked to

engage in a daily positive work reflection activity, they found that those in the intervention group did not differ in well-being from those in the control group. Consequently, future research may investigate the extent to which such training benefits student-employees. Indeed, for some individuals, engaging in relaxation activities could actually be detrimental. If individuals who are already behind on their coursework are encouraged to take time off to engage in relaxation, they might fall even further behind. If it is found that training on recovery processes is effective for well-being and at least has no impact or a positive impact on student success (e.g., GPA), such training could be included as part of student orientation, or for all students who are employed by the university.

Another future avenue for research could be focusing on full-time employees who also are going to school. Specifically, it will be important to see whether detachment from work will show negative effects like it did in this study when individuals are working full time and taking classes. Various studies have found that negative effects of work appear when individuals work above a certain number of hours (McCormick et al., 2010; Umbach, Padgett, & Pascarella, 2010). In this regard, it is notable that when only looking at individuals who worked at least the median number of hours per week, the negative effects of detachment from work remained, and in some cases appeared to be stronger. However, given the low number of full-time employees in the current sample, it will be important to have a sample of only full-time employees to fully uncover the processes occurring.

Another important area for future research is to better understand why the recovery processes studied are related to some measures of well-being but not to others.

Research has shown that things that relate to positive well-being do not necessarily also relate to negative well-being (Sonnentag, 2015). Future research may also be beneficial in continuing to deepen our understanding of the differential predictors of positive well-being indicators and the differential predictors of negative well-being indicators.

Lastly, as was stated previously, one potential reason why stronger results were not found for detachment from school and work may have been that the detachment may have occurred earlier in the day, and by the time the evening well-being measure was completed the resources gained from the detachment had been spent through further work and school. Future research could clarify this, including looking at the time of day that detachment from work or school occurred. Indeed, there is a growing amount of research looking at the value of breaks within the workday (e.g., Trougakos, Hideg, Cheng, & Beal, 2014; Zacher, Brailsford, & Parker, 2014).

Limitations

Although there were many strengths to this study, including the fact that data were collected multiple times per day across multiple days, there were also numerous limitations. One limitation is the sample and design used. A great number of published studies utilizing daily designs do not reimburse participants, which likely results in a subject pool who is committed to the study for intrinsic reasons. In this study, students had a definite incentive to complete the surveys, given the course credit that was attached to completion of the study, which may have resulted in careless responding. Consequently, there were numerous decisions that the researcher had to make in order to resolve participant data entry error while minimizing deletion of data. Although the researcher attempted to find all such errors, there likely were other entry errors that may

have influenced responses, such as entering incorrect sleep times or merely carelessly answering.

Another potential limitation has to do with the method of data collection. The survey software used tagged each response with the email address to whom it was sent, allowing the surveys to be connected to the individual completing them. However, there nevertheless exists the possibility that an individual was sent the survey but had someone else fill it out for them. Given how short the surveys were, however, individuals would have had little motivation to do this. Furthermore, given the number of data points collected for each individual, if this was done it likely had little impact. Additionally, for certain participants the surveys had to be sent manually increasing the possibility of a survey being sent to the incorrect individual.

Another limitation, and potential caveat for the data, is that some preliminary analyses indicated that heterogeneity of variance may have existed, as tested using Levene's test with a macro written by Bethany Bell (Bell, Schoeneberer, Morgan, Kromrey, & Ferron, 2010). However, in discussing this, Raudenbush and Bryk write the following, "In general, a violation of the homogeneity assumption is not per se a serious problem for estimating either the level-2 coefficients or their standards errors. We are principally concerned about it because such heterogeneity may indicate a possible misspecification of the level-1 model. In particular, unidentified slope heterogeneity at level 1 would appear as heterogeneity of level-1 error variance" (pg. 264). Given the lengths that were taken to properly specify the level-1 model, including the number of predictors and entering all random effects initially and removing non-significant effects, it seems that the heterogeneity of variance is a non-issue.

An additional limitation has to do with the fact that the data were somewhat non-normally distributed, as can be seen in Appendix H. However, a visual assessment of the histograms of the residuals showed a distribution that appeared to be fairly normal (see Appendix H). Thus, it seems that the non-normality is fairly small.

Lastly, although the covariance structure imposed on the residuals was based on theoretical considerations, it seems that for some analyses another covariance structure may have been preferable. As can be seen in Appendix E, the autoregressive residual structure resulted in the best fit for analyses done with all days of data collection, but this was not the case when only looking at days when the individuals worked, or days when the individuals worked and went to school. This is likely due to the fact that individuals may not have worked on successive days, making it less likely that the observations were correlated. However, given the similarity in the patterns of findings between the analyses looking at all days and other analyses, it is unlikely that imposing a different covariance structure would have made any large differences in results.

Conclusion

While much research has been done showing the value of detachment from work for increasing well-being, the current study suggests that, at least for student employees, the most value lies in pursuing relaxation activities and mastery activities. Although detachment from school did show positive effects, such effects were not nearly as robust. Furthermore, although prevention focus seems to be negatively related to well-being, it does not seem to demonstrate interaction effects with detachment from school or work. Lastly, regulatory focus seems to have some relationship with engagement in

recovery processes, but the findings depend on whether the individual is a full-time student working at least the median number of hours.

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Appendix A: Tables from Main Body of Paper

Table 1
ICC Values for Well-Being Hypotheses

	Vigor		Recovery		Physical Fatigue		Mental Fatigue	
	Eve	Morn	Eve	Morn	Eve	Morn	Eve	Morn
Between	.56	.82	.48	.56	.62	.82	1.01	1.03
Within	1.41	1.26	1.43	1.30	1.34	1.14	1.46	1.25
ICC	.28	.39	.25	.30	.32	.42	.41	.45

Table 2
Parameter Estimates for Positive Well-Being Outcomes across All Days

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.41	66.90***	3.58	58.82***	4.6	96.27***	4.69	90.91***
Time elapsed[a]			0.3	6.88***			0.12	2.90**
Stress school	-0.1	-3.63***	-.02	-0.88	-.11	-4.40***	-.03	-0.98
Stress work	-.02	-0.76	-.03	-1.00	-.06	-1.75^	-.01	-0.44
Hours school	-.01	-1.05	0	-0.22	-.02	-1.99*	0	-0.19
Hours work	-.04	-3.41***	0	0.20	-.03	-2.70**	0.01	1.25
Hours sleep	0.01	0.66	0.08	4.22***	0.01	0.59	0.11	5.99***
Quality sleep	-0.1	-2.66**	-.39	-9.58***	-.11	-2.93**	-.48	-12.03***
Gen. Sch Detach	0.04	1.25	0.03	0.89	0.08	2.36*	0.07	2.09*
Gen. Wrk Detach	-.03	-0.94	-.11	-2.95**	-.02	-0.66	0.01	0.34
Relaxation	0.21	6.77***	0.07	2.32*	0.4	13.80***	0.14	4.66***
Mastery	0.22	7.19***	0.08	2.26*	0.23	8.20***	0.11	3.22**

Note. *p<.05, **p<.01 ***p<.001 a. Time between waking up and taking survey.

Table 3

Parameter Estimates for Negative Well-Being Outcomes across All Days

	Physical Fatigue				Mental Fatigue			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.97	74.91***	3.65	60.35***	3.52	53.71***	3.34	49.63***
Time elapsed[a]			-.17	-4.38***			-.19	-4.52***
Stress school	0.15	5.59***	0.01	0.48	0.14	4.60***	0.01	0.31
Stress work	0.04	1.16	0.04	1.57	0.06	1.83^	0.04	1.35
Hours school	0.01	0.92	0	0.52	0.01	1.39	0.01	0.67
Hours work	0.05	4.95***	0	-0.50	0.02	1.70^	-.01	-0.82
Hours sleep	-.01	-0.38	-.11	-6.08***	0.01	0.70	-.06	-3.35***
Quality sleep	0.12	3.45***	0.4	11.95***	0.08	2.24*	0.36	8.71***
Gen. Sch Detach	-.05	-1.61	-.03	-1.02	-.02	-0.58	-.05	-1.28
Gen. Wrk Detach	0.04	0.96	0.02	0.73	0.08	1.83^	0.06	1.56
Relaxation	-.25	-8.04***	-.08	-2.91**	-.18	-5.77***	-.03	-1.05
Mastery	-.13	-4.35***	-.03	-0.93	-.08	-2.43*	-.09	-2.42*

Note. *p<.05, **p<.01 ***p<.001 ^p<.1 a. Time between waking up and taking survey.

Table 4

Parameter Estimates for Positive Well-Being Outcomes across School Days

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.34	64.68***	3.55	56.80***	4.53	88.71***	4.65	85.68***
Time elapsed[a]			0.31	6.21***			0.13	2.87**
Stress school	-.14	-4.27***	-.02	-0.60	-.17	-5.28***	-.05	-1.60
Stress work	-.02	-0.58	-.01	-0.29	-.04	-0.98	0	-0.12
Hours school	-.01	-0.70	0	-0.35	-.03	-2.28*	0	-0.16
Hours work	-.03	-2.05*	0	-0.15	-.03	-2.35*	0.01	1.03
Hours sleep	0.02	1.19	0.11	5.03***	0.01	0.73	0.13	5.90***
Quality sleep	-.07	-1.70^	-.32	-6.93***	-0.1	-2.28*	-.42	-9.67***
Gen. Sch Detach	-.01	-0.18	0.06	1.44	0.07	1.89^	0.08	2.29*
Gen. Wrk Detach	0.01	0.28	-.06	-1.22	-.03	-0.76	-.04	-0.80
DetWork@S	-.04	-0.85	-.05	-1.09	0.05	1.08	0.09	2.12*
Relaxation	0.18	5.44***	0.07	2.18*	0.36	11.07***	0.12	3.85***
Mastery	0.17	4.99***	0.05	1.53	0.19	5.64***	0.06	1.74^
Dev. Model 1	7202.9		6562.3		7048.4		6313.0	
Dev. Model 2	7202.2		6561.1		7043.8		6308.7	
ΔDev(ΔParams.)	.7(1)		1.2(1)		4.6(2)		4.3(1)*	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Table 5
Parameter Estimates for Negative Well-Being Outcomes across School Days

	Physical Fatigue				Mental Fatigue			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4.03	71.57***	3.67	57.91***	3.58	52.19***	3.36	47.85***
Time elapsed[a]			-.19	-4.78***			-.22	-4.65***
Stress school	0.2	6.44***	0.02	0.76	0.18	5.05***	0.03	1.04
Stress work	0.05	1.38	0.01	0.47	0.08	2.26*	0.04	1.22
Hours school	0.01	0.97	0	0.24	0.02	1.45	0.01	0.46
Hours work	0.04	3.64***	0	-0.25	0.01	0.91	-.01	-0.55
Hours sleep	-.03	-1.94^	-.14	-6.22***	-.02	-1.17	-.09	-4.08***
Quality sleep	0.1	2.65**	0.37	9.72***	0.07	1.71^	0.29	6.96***
Gen. Sch Detach	-.02	-0.60	-.06	-1.79^	0.01	0.35	-.07	-1.74^
Gen. Wrk Detach	-.05	-1.14	0.01	0.19	0.04	0.84	0.06	1.33
DetWork@S	0.1	2.39*	0.03	0.59	0.07	1.25	-.03	-0.59
Relaxation	-.25	-7.55***	-.08	-2.90**	-.18	-5.29***	-.02	-0.62
Mastery	-.13	-3.74***	-.03	-0.86	-.12	-3.10**	-.08	-2.23*
Dev. Model 1	6944.1		6157.0		7382.7		6568.6	
Dev. Model 2	6938.5		6152.1		7374.7		6563.9	
ΔDev(ΔParams.)	5.6(1)*		4.9(2)^		8(2)*		4.7(2)^	

Note. *p<.05, **p<.01 ***p<.001 ^p<.1 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Table 6

Parameter Estimates for Positive Well-Being Outcomes across Work Days

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.27	56.16***	3.58	53.33***	4.49	73.34***	4.69	81.25***
Time elapsed[a]			0.24	4.40***			0.08	1.58
Stress school	-.12	-2.79**	-.02	-0.58	-.06	-1.34	-.06	-1.62
Stress work	-.04	-0.99	0.02	0.44	-.13	-2.70**	-.04	-0.84
Hours school	0	-0.01	0	-0.07	-.05	-2.69**	0.01	0.60
Hours work	-.04	-1.82^	0.04	1.67^	-.02	-0.76	0.05	2.51*
Hours sleep	0.03	0.96	0.07	2.20*	0.01	0.45	0.08	2.92**
Quality sleep	-.03	-0.44	-.40	-6.67***	-.02	-0.37	-.56	-9.21***
Gen. Sch Detach	0.06	0.95	0.04	0.54	0.06	1.01	0.1	1.70^
DetSch@W	0	-0.03	0.03	0.51	-.04	-0.74	-.01	-0.09
Gen. Wrk Detach	-.06	-1.06	-.12	-1.63^	0.04	0.57	0.01	0.15
Relaxation	0.19	4.33***	0.03	0.78	0.33	7.42***	0.13	3.11**
Mastery	0.26	5.22***	0.08	1.64	0.27	5.75***	0.09	2.03*
Dev. Model 1	3773.1		3462.6		3686.9		3189.0	
Dev. Model 2	3764.8		3458.2		3682.4		3183.2	
ΔDev(ΔParams.)	8.3(2)*		4.4(2)		4.5(2)		5.8(2)^	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. DetSch@W is detachment from school while at work. a. Time between waking up and taking survey.

Table 7

Parameter Estimates for Negative Well-Being Outcomes across Work Days

	Physical Fatigue				Mental Fatigue			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4.14	62.46***	3.66	53.49***	3.63	44.16***	3.36	45.88***
Time elapsed[a]			-.11	-2.22*			-.21	-3.45***
Stress school	0.12	2.86**	-.03	-0.76	0.11	2.58**	0.01	0.27
Stress work	0.12	3.11**	0.05	1.26	0.18	4.03***	0.04	0.88
Hours school	0.01	0.57	0	-0.02	0.03	1.47	-.03	-1.76^
Hours work	0.05	2.40*	-.04	-2.01*	0.01	0.27	-.06	-2.80**
Hours sleep	-.02	-1.00	-.11	-3.80***	-.04	-1.57	-.02	-0.78
Quality sleep	0.08	1.43	0.46	6.85***	-.01	-0.26	0.46	6.79***
Gen. Sch Detach	-.08	-1.46	-.13	-2.56*	0.08	1.40	-.16	-2.72**
DetSch@W	0.03	0.43	-.05	-0.90	-.11	-1.99*	-.05	-0.71
Gen. Wrk Detach	0.07	1.21	0.04	0.83	0.16	2.64**	0.06	1.09
Relaxation	-.25	-5.75***	-.07	-2.00*	-.19	-4.04***	-.02	-0.60
Mastery	-.16	-3.52***	0.01	0.33	-.15	-3.10**	-0.1	-2.13*
Dev. Model 1	3690.1		3246.6		3823.8		3435.6	
Dev. Model 2	3682.9		3245.8		3820.0		3426.2	
ΔDev(ΔParams.)	7.2(2)*		.8(1)		3.8(1)^		9.4(2)**	

Note. *p<.05, **p<.01 ***p<.001 ^p<.1 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. DetSch@W is detachment from school while at work. a. Time between waking up and taking survey.

Table 8

Parameter Estimates for Positive Well-Being Outcomes across Work/School Days

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.27	53.33***	3.55	49.05***	4.43	68.81***	4.66	74.52***
Time elapsed[a]			0.24	3.89***			0.04	0.73
Stress school	-.16	-3.14**	-.04	-0.93	-0.1	-1.99*	-.07	-1.59
Stress work	-.03	-0.65	0.06	1.13	-.12	-2.19*	-.02	-0.37
Hours school	0.01	0.28	-.01	-0.27	-.04	-1.94^	0.01	0.50
Hours work	-.02	-0.56	0.04	1.31	0	-0.11	0.07	2.61**
Hours sleep	0.02	0.75	0.13	4.05***	0.01	0.30	0.08	2.52*
Quality sleep	-.08	-1.22	-.33	-4.49***	-.01	-0.19	-.54	-7.77***
Gen. Sch Detach	0.02	0.24	0	-0.04	0.02	0.31	0.12	1.89^
DetSch@W	0.07	0.89	0.13	1.56	0.04	0.59	0.07	1.07
Gen. Wrk Detach	-.06	-0.73	-.04	-0.42	-.02	-0.26	-.05	-0.60
DetWork@S	-.02	-0.36	-.05	-0.66	0.01	0.11	0.06	0.93
Relaxation	0.16	3.49***	0.04	0.88	0.29	5.61***	0.13	3.14**
Mastery	0.21	3.87***	0.06	1.08	0.21	4.07***	0.05	1.08
Dev. Model 1	3011.3		2830.8		2960.3		2624.6	
Dev. Model 2	3001.4		2817.5		2959.9		2616.2	
ΔDev(ΔParams.)	9.9(3)*		13.3(3)**		.4(2)		8.4(3)*	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. DetSch@W is detachment from school while at work. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Table 9

Parameter Estimates for Negative Well-Being Outcomes across Work/School Days

	Physical Fatigue				Mental Fatigue			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4.15	57.93***	3.65	48.94***	3.63	42.55***	3.36	42.66***
Time elapsed[a]			-.08	-1.51			-.21	-3.06**
Stress school	0.15	2.96**	-.03	-0.72	0.15	2.88**	-.01	-0.17
Stress work	0.1	2.32*	0.04	0.89	0.16	3.46***	0.02	0.32
Hours school	0.01	0.39	0.01	0.52	0.03	1.35	-.02	-1.06
Hours work	0.03	0.96	-.08	-2.64**	-.02	-0.73	-.06	-2.16*
Hours sleep	-.04	-1.40	-.15	-5.63***	-.05	-1.77^	-.07	-1.94^
Quality sleep	0.07	1.18	0.4	5.64***	-.04	-0.67	0.39	5.28***
Gen. Sch Detach	-0.1	-1.67^	-0.1	-1.68^	0.09	1.16	-.13	-2.00*
DetSch@W	-.03	-0.42	-.13	-2.29*	-.15	-2.29*	-.09	-1.20
Gen. Wrk Detach	0.01	0.11	0.01	0.14	0.14	1.97*	0.07	0.90
DetWork@S	0.12	1.90^	0.08	1.31	0.05	0.83	-.02	-0.30
Relaxation	-.23	-4.76***	-.08	-2.06*	-.19	-3.71***	-.03	-0.66
Mastery	-.13	-2.64**	0.02	0.49	-.15	-2.93**	-.07	-1.44
Dev. Model 1	2933.1		2663.0		3078.3		2827.9	
Dev. Model 2	2929.4		2656.6		3072.7		2822.2	
ΔDev(ΔParams.)	3.7(2)		6.4(2)*		5.6(2)^		5.7(3)	

Note. *p<.05, **p<.01 ***p<.001 ^p<.1 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. DetSch@W is detachment from school while at work. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Table 10
Summary of Findings

			Vigor		Recovery		Phys. Fat.		Men. Fat.	
			E	M	E	M	E	M	E	M
Detachment from School	All	All	ns	ns	*	*	ns	ns	ns	ns
		School	ns	ns	^	*	ns	^	ns	^
		Work	ns	ns	ns	^	ns	*	ns	**
		Both	ns	ns	ns	^	^	^	ns	*
	Median	All	ns	^	^	ns	ns	^	ns	^
		School	ns	ns	ns	ns	ns	ns	ns	ns
		Work	ns	ns	ns	ns	ns	**	ns	***
		Both	ns	ns	ns	ns	ns	^	ns	**
Det. S (at w)	All	Work	ns	ns	ns	ns	ns	ns	*	ns
		Both	ns	ns	ns	ns	ns	*	*	ns
	Median	Work	ns	ns	ns	ns	ns	ns	ns	ns
		Both	ns	*	ns	ns	ns	ns	*	ns
Detachment from Work	All	All	ns	**(n)	ns	ns	ns	ns	^(n)	ns
		School	ns	ns	ns	ns	ns	ns	ns	ns
		Work	ns	^(n)	ns	ns	ns	ns	**(n)	ns
		Both	ns	ns	ns	ns	ns	ns	*(n)	ns
	Median	All	ns	*(n)	ns	ns	ns	ns	^(n)	*(n)
		School	ns	ns	ns	ns	ns	ns	ns	*(n)
		Work	ns	ns	ns	ns	ns	ns	*(n)	*(n)
		Both	ns	ns	ns	ns	ns	ns	*(n)	ns
Det. W (at s)	All	School	ns	ns	ns	*	* (n)	ns	ns	ns
		Both	ns	ns	ns	ns	^ (n)	ns	ns	ns
	Median	School	ns	ns	ns	ns	ns	ns	ns	ns
		Both	ns	ns	ns	ns	ns	ns	ns	ns

Note. ^p<.10 *p<.05, **p<.01 ***p<.001. n means that the significant or marginally significant results were in the opposite direction as expected.

Table 11

Parameter Estimates for Positive Well-Being Outcomes across All Days When Considering Prevention Focus

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.41	70.90***	3.62	68.57***	4.61	113.73***	4.71	115.81***
Time elapsed[a]			0.35	8.51***			0.12	3.08**
Stress school	-.16	-6.38***	-.06	-2.79**	-.22	-9.32***	-0.1	-4.16***
Stress work	-.05	-1.75^	-.04	-1.36	-.12	-3.62***	-.06	-2.04*
Hours school	-.02	-2.20*	0	0.24	-.04	-3.70***	0	0.11
Hours work	-.04	-4.20***	0.01	0.91	-.04	-3.90***	0.01	1.54
Hours sleep	0	0.01	0.08	4.54***	-.01	-0.34	0.11	6.40***
Quality sleep	-.15	-4.05***	-.44	-11.10***	-0.2	-5.33***	-.56	-14.35***
Prevention Focus	-.01	-0.27	-.11	-2.97**	-.02	-0.67	-.04	-1.33
Dev. Model 1	9615.5		8172.5		9397.2		7905.4	
Dev. Model 2	9615.4		8163.8		9396.7		7903.6	
ΔDev(ΔParams.)	.1(1)		8.7(1)**		.5(1)		1.8(1)	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. a. Time between waking up and taking survey.

Table 12

Parameter Estimates for Negative Well-Being Outcomes across All Days When Considering Prevention Focus

	Physical Fatigue				Mental Fatigue			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.96	83.99***	3.61	70.85***	3.51	57.69***	3.32	54.31***
Time elapsed[a]			-0.2	-5.37***			-0.2	-4.88***
Stress school	0.23	8.90***	0.06	2.77**	0.2	7.10***	0.05	2.16*
Stress work	0.07	2.26*	0.06	2.59**	0.08	2.46*	0.05	1.55
Hours school	0.02	2.22*	0	0.08	0.02	1.91^	0	0.05
Hours work	0.05	5.40***	-.01	-1.03	0.02	1.78^	-.01	-1.22
Hours sleep	0	-0.04	-.12	-6.67***	0.01	0.94	-.07	-3.55***
Quality sleep	0.17	4.95***	0.45	12.56***	0.11	2.67**	0.39	9.59***
Prevention Focus	0.08	2.38*	0.13	3.57***	0.09	2.13*	0.15	3.45***
Dev. Model 1	9325.0		7745.0		9766.7		8239.5	
Dev. Model 2	9319.4		7732.5		9762.2		8227.8	
ΔDev(ΔParams.)	5.6(1)*		12.5(1)***		4.5(1)*		11.7(1)***	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. a. Time between waking up and taking survey.

Table 13

ICC Values for Predicting Recovery Processes

	General School Detach.	Detatch. School at Work	General Work Detach.	Detatch. Work at School	Relaxation	Mastery
Between	.42	.53	.46	.51	.33	.32
Within	.65	.49	.50	.41	.80	.53
ICC	.39	.52	.48	.55	.29	.37

Table 14

Relationship Between Regulatory Focus and Detachment across All Days

	General School Detach.		General Work Detach.	
	B	*T*	*B*	*T*
Intercept	2.61	69.28***	3.49	88.45***
Stress school	-.24	-13.48***	-.01	-0.98
Stress work	0.01	0.44	-.18	-8.25***
Hours school	-.05	-8.52***	0	0.50
Hours work	-.01	-2.11*	-.07	-8.46***
Inv. Sch	-.1	-2.37*	0.01	0.29
Inv Work	0.01	0.27	-.24	-5.32***
Prevention Focus	.01	.49	0.05	1.77^
Promotion Focus	0.01	0.33	0.06	1.59
Dev. Model 1	6836.2		6126.9	
Dev. Model 2	6835.6		6118.2	
ΔDev(ΔParams.)	.6(2)		8.7(2)*	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 15

Relationship between Detachment and Regulatory Focus across School Days

	General School Detach.		General Work Detach.		Detach. from Work (at School)	
	B	*T*	*B*	*T*	*B*	*T*
Intercept	2.46	63.19***	3.49	88.22***	3.56	86.22***
Stress school	-.2	-10.63***	0.02	1.22	0.03	2.07*
Stress work	-.01	-.41	-.19	-7.73***	-.18	-7.52***
Hours school	-.04	-5.75***	0	-0.62	0	-0.36
Hours work	-.01	-1.44	-.07	-8.14***	-.05	-6.13***
Inv. Sch	-.11	-2.47*	0.01	0.27	0.04	0.75
Inv Work	0.02	0.39	-.25	-5.62***	-.27	-5.78***
Prevention Focus	.01	.22	0.05	1.60	0.05	1.72^
Promotion Focus	0	0.13	0.05	1.37	0.06	1.54
Dev. Model 1	5197.1		4581.1		4624.6	
Dev. Model 2	5197.0		4574.5		4616.5	
ΔDev(ΔParams.)	.1(2)		6.6(2)*		8.1(2)*	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 16

Relationship between Detachment and Regulatory Focus across Work Days

	General School Detach.		Detach. from Sch (at Work)		General Work Detach.	
	B	*T*	*B*	*T*	*B*	*T*
Intercept	2.59	60.45***	2.67	56.97***	3.16	66.38***
Stress school	-.26	-10.57***	-.24	-9.93***	-.02	-1.23
Stress work	0	-.18	0.02	1.06	-.12	-4.93***
Hours school	-.04	-4.19***	-.03	-3.31**	0	0.19
Hours work	-.01	-0.85	-.01	-1.07	-.05	-3.22**
Inv. Sch	-.11	-2.17*	-.07	-1.34	-.07	-1.33
Inv Work	-.02	-0.52	-.02	-0.46	-0.3	-5.70***
Prevention Focus	.01	.37	0.03	0.99	0.01	0.33
Promotion Focus	0.05	1.22	0	0.07	0.07	1.54
Dev. Model 1	2625.0		2677.9		2565.5	
Dev. Model 2	2623.0		2676.8		2562.6	
ΔDev(ΔParams.)	2(2)		1.1(2)		2.9(2)	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 17

Relationship between Detachment and Regulatory Focus across Work/School Days

	General School Detach.		Detach . from Sch (at Work)		General Work Detach.		Detach. from Work (at School)	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	2.49	54.49***	2.58	51.00***	3.2	63.62***	3.27	64.68***
Stress school	-.2	-7.91***	-.2	-7.89***	0	-0.09	0.05	2.15*
Stress work	-.02	-0.91	0.01	0.54	-.15	-5.21***	-.18	-5.88***
Hours school	-.04	-3.34***	-.04	-3.48***	0	0.25	0	-0.22
Hours work	-.03	-1.79^	-.03	-2.15*	-.06	-3.25**	-.02	-1.33
Inv. Sch	-.08	-1.53	-.03	-0.55	-0.1	-1.74^	-.04	-0.64
Inv Work	-.02	-0.33	-.03	-0.49	-.31	-5.34***	-0.3	-5.14***
Prev. Focus	0.02	0.65	0.05	1.30	0.01	0.28	0	0.05
Prom. Focus	0.04	.97	-0.01	-0.21	0.06	1.33	0.08	1.69^
Dev. Model 1	2058.6		2136.4		1989.2		2149.4	
Dev. Model 2	2056.8		2134.7		1987.0		2146.2	
ΔDev(ΔPrts.)	1.8(2)		1.7(2)		2.2(2)		3.2(2)	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 18

Relationship between Relaxation/Mastery and Regulatory Focus across All Days

	Relaxation		Mastery	
	B	*T*	*B*	*T*
Intercept	3.4	96.51***	2.79	77.21***
Stress school	-.16	-8.92***	-.04	-2.21*
Stress work	-.09	-3.71***	-.03	-1.46
Hours school	-.05	-6.56***	0.01	1.37
Hours work	-.04	-5.03***	-.02	-2.88**
Inv. Sch	-.01	-0.25	0.05	1.11
Inv Work	-.08	-2.08*	0.11	2.69**
Prevention Focus	0.05	1.70^	0.01	0.46
Promotion Focus	0.07	1.93^	0.03	0.74
Dev. Model 1	7655.9		6916.9	
Dev. Model 2	7645.9		6915.8	
ΔDev(ΔParams.)	10(2)**		1.1(2)	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 19

Relationship between Relaxation/Mastery and Regulatory Focus across School Days

	Relaxation		Mastery	
	B	*T*	*B*	*T*
Intercept	3.32	88.13***	2.79	75.23***
Stress school	-.19	-8.99***	-.04	-2.36*
Stress work	-.08	-2.99**	-.02	-0.91
Hours school	-.06	-6.36***	0.01	1.20
Hours work	-.05	-5.14***	-.03	-3.86***
Inv. Sch	-.02	-0.49	0.03	0.78
Inv Work	-0.1	-2.41*	0.11	2.56*
Prevention Focus	0.05	1.67^	0.02	0.57
Promotion Focus	0.08	2.23*	0.04	1.05
Dev. Model 1	5939.0		5331.4	
Dev. Model 2	5927.5		5329.3	
ΔDev(ΔParams.)	11.5(2)**		2.1(2)	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 20

Relationship between Relaxation/Mastery and Regulatory Focus across Work Days

	Relaxation		Mastery	
	B	*T*	*B*	*T*
Intercept	3.26	75.42***	2.71	64.25***
Stress school	-.18	-6.82***	-.06	-2.13*
Stress work	-.12	-3.80***	-.03	-1.33
Hours school	-.06	-4.19***	-.01	-0.88
Hours work	-.05	-2.92**	-.01	-1.02
Inv. Sch	-.02	-0.35	0.08	1.61
Inv Work	-.19	-3.85***	0.11	2.24*
Prevention Focus	0.05	1.44	-.02	-0.69
Promotion Focus	0.09	2.10*	0.02	0.41
Dev. Model 1		3196.3		2814.6
Dev. Model 2		3187.8		2814.0
ΔDev.(ΔParams.)		8.5(2)*		.6(2)

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 21

Relationship between Relaxation/Mastery across Work/School Days

	Relaxation		Mastery	
	B	*T*	*B*	*T*
Intercept	3.2	67.70***	2.67	60.87***
Stress school	-.21	-7.21***	-.05	-1.62
Stress work	-.11	-3.15**	-.05	-2.00*
Hours school	-.05	-3.17**	0	0.13
Hours work	-.04	-1.88^	-.01	-0.79
Inv. Sch	-.06	-1.10	0.06	1.20
Inv Work	-0.2	-3.81***	0.11	2.22*
Prevention Focus	0.05	1.27	-.03	-0.89
Promotion Focus	0.09	1.91^	0.02	0.37
Dev. Model 1		2578.0		2269.5
Dev. Model 2		2571.1		2268.7
ΔDev.(ΔParams.)		6.9(2)*		.8(2)

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 22

Parameter Estimates for Interaction between Prevention Focus and Detachment for Positive Well-Being Outcomes across All Days

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.41	66.96***	3.58	59.73***	4.6	96.61***	4.69	91.43***
Time elapsed[a]			0.3	6.84***			0.12	2.94**
Stress school	-0.1	-3.61***	-.02	-.93	-.11	-4.34***	-.03	-1.02
Stress work	-.02	-0.76	-.03	-1.01	-.06	-1.76^	-.01	-0.46
Hours school	-.01	-1.08	0	-0.13	-.02	-2.05*	0	-0.20
Hours work	-.04	-3.41***	0	0.24	-.03	-2.70**	0.01	1.25
Hours sleep	0.01	0.65	0.08	4.21***	0.01	0.59	0.11	5.98***
Quality sleep	-0.1	-2.68**	-.39	-9.67***	-.11	-2.98**	-.47	-11.98***
Gen. Sch Detach	0.04	1.23	0.03	1.08	0.08	2.35*	0.06	2.02*
Gen. Wrk Detach	-.04	-1.05	-.11	-2.80**	-.03	-0.92	0.02	0.40
Relaxation	0.21	6.78***	0.06	2.23*	0.4	13.80***	0.14	4.69***
Mastery	0.22	7.16***	0.07	2.28*	0.23	8.14***	0.11	3.24**
Prevention Focus	-.03	-0.75	-.12	-2.77**	-.05	-1.39	-.06	-1.72^
DetSch*Prev Focus	0	-0.06	-.04	-1.73^	-.01	-0.28	0.03	1.29
DetWork*Prev Focus	0.02	0.98	-.04	-1.49	0.05	2.19*	-.04	-1.53
Dev. Model 1	9486.9		8190.1		9092.2		7926.2	
Dev. Model 2	9485.9		8184.5		9087.4		7922.6	
ΔDev.(ΔPrms.)	1(2)		5.6(2)		4.8(2)^		3.6(2)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. a. Time between waking up and taking survey.

Table 23

Parameter Estimates for Interaction between Prevention Focus and Detachment for Negative Well-Being Outcomes across All Days

	Physical Exhaustion				Mental Exhaustion			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.97	76.05***	3.65	61.83***	3.52	54.41***	3.34	50.85***
Time elapsed[a]			-.16	-4.31***			-.19	-4.49***
Stress school	0.15	5.58***	0.01	0.49	0.14	4.59***	0.01	0.35
Stress work	0.04	1.15	0.04	1.57	0.05	1.82^	0.04	1.37
Hours school	0.01	1.00	0	0.52	0.01	1.40	0.01	0.64
Hours work	0.05	4.99***	0	-0.50	0.02	1.70^	-.01	-0.83
Hours sleep	-.01	-0.34	-.11	-6.07***	0.01	0.69	-.06	-3.32***
Quality sleep	0.12	3.48***	0.4	11.96***	0.08	2.25*	0.36	8.70***
Gen. Sch Detach	-.05	-1.47	-.03	-.99	-.02	-0.61	-.05	-1.28
Gen. Wrk Detach	0.04	1.14	0.02	0.71	0.08	1.84^	0.06	1.51
Relaxation	-.25	-8.11***	-.08	-2.91**	-.18	-5.77***	-.03	-1.03
Mastery	-.13	-4.33***	-.03	-0.92	-.08	-2.42*	-.09	-2.42*
Prevention Focus	0.11	2.89**	0.15	3.53***	0.12	2.69**	0.16	3.54***
DetSch*Prev Focus	-.02	-0.99	-.01	-0.29	0.01	0.41	-.01	-0.28
DetWork*Prev Focus	-.04	-1.47	0.01	0.44	-.01	-0.28	0.03	1.24
Dev. Model 1	9178.8		7755.1		9678.3		8206.1	
Dev. Model 2	9175.4		7754.8		9678.0		8204.6	
ΔDev.(ΔPrms.)	3.4(2)		.3(2)		.3(2)		1.5(2)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. a. Time between waking up and taking survey.

Table 24

Parameter Estimates for Interaction between Prevention Focus and Detachment for Positive Well-Being Outcomes across School Days

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.34	64.72***	3.55	57.63***	4.52	89.11***	4.65	86.10***
Time elapsed[a]			0.32	6.21***			0.14	3.05**
Stress school	-.14	-4.27***	-.02	-0.61	-.17	-5.28***	-.05	-1.65
Stress work	-.02	-0.58	-.01	-0.24	-.04	-0.97	0	-0.10
Hours school	-.01	-0.74	0	-0.36	-.03	-2.31*	0	-0.26
Hours work	-.03	-2.00*	0	-0.11	-.03	-2.31*	0.01	1.05
Hours sleep	0.02	1.18	0.11	5.06***	0.01	0.74	0.13	6.03***
Quality sleep	-.07	-1.75^	-.32	-6.93***	-0.1	-2.32*	-.42	-9.55***
Gen. Sch Detach	-.01	-0.27	0.06	1.47	0.07	1.82^	0.07	2.11*
Gen. Wrk Detach	0.02	0.32	-.04	-0.92	-.03	-0.75	-.02	-0.37
DetWork@S	-.05	-0.97	-.06	-1.32	0.05	0.94	0.07	1.60
Relaxation	0.19	5.49***	0.07	2.15*	0.36	11.08***	0.13	3.98***
Mastery	0.17	4.95***	0.05	1.50	0.19	5.60***	0.06	1.68^
Prevention Focus	-.03	-0.70	-.12	-2.75**	-.06	-1.55	-.07	-1.91^
DetSch*Prev Focus	0	-0.01	-.01	-0.49	-.01	-0.38	0.04	1.65^
DetWork*Prev Focus	0.02	0.69	-.06	-1.82^	0.03	0.86	-.08	-2.77*
DetWork@S* PrevFocus	0.05	1.54	0.05	1.44	0.05	1.57	0.1	3.35***
Dev. Model 1	7201.7		6553.6		7041.4		6304.9	
Dev. Model 2	7196.7		6549.6		7036.0		6289.4	
ΔDev.(ΔPrms.)	5(3)		4(3)		5.4(3)		15.5(3)**	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Table 25

Parameter Estimates for Interaction between Prevention Focus and Detachment for Negative Well-Being Outcomes across School Days

	Physical Exhaustion				Mental Exhaustion			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4.03	72.63***	3.67	59.36***	3.58	52.74***	3.37	49.08***
Time elapsed[a]			-.19	-4.71***			-.22	-4.66***
Stress school	0.2	6.46***	0.02	0.77	0.18	5.05***	0.03	1.09
Stress work	0.05	1.35	0.01	0.46	0.08	2.23*	0.04	1.20
Hours school	0.01	1.02	0	0.29	0.02	1.45	0.01	0.50
Hours work	0.04	3.62***	0	-0.23	0.01	0.90	-.01	-0.51
Hours sleep	-.03	-1.91^	-.14	-6.25***	-.02	-1.17	-.09	-4.10***
Quality sleep	0.1	2.68**	0.36	9.68***	0.07	1.72^	0.29	6.93***
Gen. Sch Detach	-.02	-0.50	-.06	-1.73^	0.02	0.36	-.07	-1.68^
Gen. Wrk Detach	-.05	-1.14	0.01	0.14	0.04	0.72	0.05	1.13
DetWork@S	0.11	2.48*	0.03	0.66	0.07	1.40	-.02	-0.35
Relaxation	-.25	-7.61***	-.08	-2.94**	-.19	-5.28***	-.02	-0.63
Mastery	-.13	-3.72***	-.03	-0.83	-.12	-3.09**	-.07	-2.20*
Prevention Focus	0.11	2.77**	0.15	3.51***	0.11	2.34*	0.17	3.58***
DetSch*Prev Focus	-.01	-0.42	-.02	-0.75	0.01	0.41	-.04	-1.65^
DetWork*Prev Focus	-.03	-0.89	0.01	0.38	0.02	0.60	0.05	1.62
DetWork@S* PrevFocus	-.05	-1.54	-.01	-0.42	-.04	-1.13	-.03	-0.97
Dev. Model 1	6930.9		6140.1		7369.3		6551.4	
Dev. Model 2	6925.2		6139.3		7367.9		6546.3	
ΔDev.(ΔPrms.)	5.7(3)		.8(3)		1.4(3)		5.1(3)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey. DetWork@S is detachment from work while at school.

Table 26

Parameter Estimates for Interaction between Prevention Focus and Detachment for Positive Well-Being Outcomes across Work Days

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.27	56.57***	3.57	54.37***	4.48	74.17***	4.69	81.77***
Time elapsed[a]			0.24	4.31***			0.08	1.59
Stress school	-.12	-2.83**	-.02	-0.59	-.06	-1.40	-.06	-1.64
Stress work	-.04	-1.03	0.02	0.48	-.13	-2.70**	-.04	-0.85
Hours school	0	-0.01	0	-.04	-.05	-2.60**	0.01	0.54
Hours work	-.04	-1.84^	0.04	1.68^	-.02	-0.75	0.05	2.49*
Hours sleep	0.03	1.00	0.07	2.12*	0.01	0.47	0.08	2.92**
Quality sleep	-.02	-0.40	-.41	-6.76***	-.02	-0.31	-.55	-9.16***
Gen. Sch Detach	0.05	0.84	0.04	0.68	0.05	0.92	0.1	1.70^
DetSch@W	0	-0.01	0.04	0.53	-.04	-0.71	-.01	-0.09
Gen. Wrk Detach	-.06	-1.10	-.11	-1.51	0.03	0.52***	0.01	0.12
Relaxation	0.19	4.32***	0.03	0.78	0.33	7.39***	0.13	3.10**
Mastery	0.26	5.25***	0.08	1.58	0.27	5.77*	0.09	2.01*
Prevention Focus	-.08	-2.06*	-.14	-3.07**	-.11	-2.46	-.08	-1.86^
DetSch*Prev Focus	0.04	1.09	-.07	-1.67^	0.01	0.32	0.03	0.64
DetSch@W* Prev Focus	-.04	-0.89	-0.01	-0.14	-.03	-0.90	0.01	0.26
DetWork*Prev Focus	0	0.09	-.03	-0.52	0.07	1.60	-.03	-0.63
Dev. Model 1	3760.6		3448.7		3676.4		3179.8	
Dev. Model 2	3759.0		3444.9		3673.0		3178.8	
ΔDev.(ΔPrms.)	1.6(3)		3.8(3)		3.4(3)		1(3)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. DetSch@W is detachment from school while at work. a. Time between waking up and taking survey.

Table 27

Parameter Estimates for Interaction between Prevention Focus and Detachment for Negative Well-Being Outcomes across Work Days

	Physical Exhaustion				Mental Exhaustion			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4.14	63.91***	3.66	54.83***	3.63	44.95***	3.36	47.09***
Time elapsed[a]			-.11	-2.20*			-.21	-3.38***
Stress school	0.12	2.90**	-.03	-0.76	0.11	2.63**	0.01	0.27
Stress work	0.13	3.17**	0.05	1.25	0.18	4.10***	0.04	0.86
Hours school	0.01	0.55	0	0.07	0.02	1.36	-.03	-1.74^
Hours work	0.05	2.40*	-.04	-1.95^	0	0.20	-.06	-2.81**
Hours sleep	-.03	-1.05	-.11	-3.83***	-.04	-1.66^	-.02	-0.71
Quality sleep	0.08	1.38	0.45	6.80***	-.02	-0.28	0.46	6.81***
Gen. Sch Detach	-.08	-1.38	-.13	-2.51*	0.09	1.41	-.16	-2.83**
DetSch@W	0.03	0.43	-.05	-0.88	-.11	-2.06*	-.05	-0.72
Gen. Wrk Detach	0.07	1.24	0.05	0.92	0.16	2.63**	0.06	0.99
Relaxation	-.25	-5.70***	-.07	-1.99*	-.19	-3.99***	-.02	-0.57
Mastery	-.16	-3.54***	0.01	0.33	-.15	-3.14**	-0.1	-2.08*
Prevention Focus	0.15	3.27**	0.16	3.43***	0.17	2.90**	0.18	3.46***
DetSch*Prev Focus	-.04	-1.11	-.03	-0.75	-.04	-0.97	0.02	0.64
DetSch@W* Prev Focus	0.04	1.08	-.01	-0.19	0.07	1.92^	0	-0.05
DetWork*Prev Focus	0	-0.11	0.01	0.20	0.02	0.46	0.03	0.63
Dev. Model 1	3672.4		3234.4		3811.7		3414.3	
Dev. Model 2	3670.6		3233.5		3807.8		3413.3	
ΔDev.(ΔPrms.)	1.8(3)		.9(3)		3.9(3)		1(3)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. DetSch@W is detachment from school while at work. a. Time between waking up and taking survey.

Table 28

Parameter Estimates for Interaction between Prevention Focus and Detachment for Positive Well-Being Outcomes across Work/School Days

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.27	53.58***	3.55	50.32***	4.43	69.65***	4.66	74.79***
Time elapsed[a]			0.24	3.88***			0.05	0.93
Stress school	-.16	-3.14**	-.04	-0.86	-0.1	-2.02*	-.06	-1.49
Stress work	-.03	-0.61	0.06	1.29	-.11	-2.06*	-.01	-0.13
Hours school	0	0.22	-.01	-0.32	-.04	-1.95^	0.01	0.44
Hours work	-.02	-0.59	0.04	1.35	0	-0.04	0.07	2.66**
Hours sleep	0.02	0.71	0.13	4.07***	0.01	0.27	0.08	2.63**
Quality sleep	-.08	-1.20	-.32	-4.38***	-.02	-0.24	-.53	-7.64***
Gen. Sch Detach	0.02	0.25	0	-0.02	0.03	0.41	0.12	1.93^
DetSch@W	0.06	0.80	0.13	1.63	0.03	0.43	0.07	1.04
Gen. Wrk Detach	-.06	-0.72	-.03	-0.33	0	-0.06	-.04	-0.59
DetWork@S	-.03	-0.46	-.06	-0.85	-.01	-0.18	0.04	0.71
Relaxation	0.16	3.48***	0.04	0.90	0.29	5.65***	0.13	3.25**
Mastery	0.21	3.87***	0.05	1.00	0.21	4.03***	0.05	1.04
Prevention Focus	-.06	-1.29	-.17	-3.35**	-.11	-2.30*	-.09	-1.88^
DetSch*Prev Focus	0.07	1.44	-.06	-1.12	-.03	-0.53	0.06	1.35
DetSch@W* Prev Focus	0	0.03	0.08	1.55	-.01	-0.33	0.05	1.22
DetWork*Prev Focus*Prev	-.05	-0.98	-.06	-0.96	-.05	-0.98	-0.1	-1.70^
DetWork@S *Prev Focus	0.05	1.14	0.08	1.55	0.11	2.49*	0.15	3.36***
Dev. Model 1	2999.7		2806.4		2954.6		2612.6	
Dev. Model 2	2995.7		2800.3		2948.2		2594.9	
ΔDev.(ΔPrms.)	4(4)		6.1(4)		6.4(4)		17.7(4)**	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. DetSch@W is detachment from school while at work. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Table 29

Parameter Estimates for Interaction between Prevention Focus and Detachment for Negative Well-Being Outcomes across Work/School Days

	Physical Exhaustion				Mental Exhaustion			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4.15	59.02***	3.65	50.10***	3.63	43.02***	3.37	43.75***
Time elapsed[a]			-.08	-1.55			-.21	-3.13**
Stress school	0.15	2.95**	-.03	-0.81	0.15	2.86**	-.01	-0.19
Stress work	0.1	2.34*	0.03	0.78	0.17	3.55***	0.01	0.18
Hours school	0.01	0.45	0.01	0.62	0.03	1.41	-.02	-1.04
Hours work	0.03	1.00	-.08	-2.61**	-.02	-0.69	-.06	-2.19*
Hours sleep	-.04	-1.39	-.16	-5.65***	-.05	-1.81^	-.07	-1.94^
Quality sleep	0.07	1.13	0.4	5.60***	-.05	-0.70	0.38	5.19***
Gen. Sch Detach	-0.1	-1.64	-0.1	-1.63	0.09	1.18	-.14	-2.07*
DetSch@W	-.02	-0.35	-.14	-2.32*	-.15	-2.29*	-.09	-1.19
Gen. Wrk Detach	0.01	0.11	0.01	0.13	0.16	2.11*	0.06	0.84
DetWork@S	0.12	1.93^	0.09	1.43	0.04	0.64	-.01	-0.16
Relaxation	-.22	-4.71***	-.08	-2.01*	-.19	-3.71***	-.03	-0.74
Mastery	-.13	-2.65**	0.03	0.57	-.16	-2.94**	-.07	-1.35
Prevention Focus	0.14	2.69**	0.16	3.09**	0.12	2.03*	0.18	3.13**
DetSch*Prev Focus	-.05	-1.07	-.01	-0.25	-.06	-1.12	0	0.02
DetSch@W* Prev Focus	0	0.08	-.04	-1.18	0.02	0.44	0.01	0.32
DetWork*Prev Focus*Prev	0.01	0.24	0.02	0.49	0.01	0.25	0.09	1.61
DetWork@S* Prev Focus	-.01	-0.34	-.06	-1.40	0.05	1.02	-0.1	-2.06*
Dev. Model 1	2922.3		2647.3		3068.6		2812.5	
Dev. Model 2	2920.9		2642.8		3065.9		2807.6	
ΔDev.(ΔPrms.)	1.4(4)		4.5(4)		2.7(4)		4.9(4)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. DetSch@W is detachment from school while at work. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Appendix B: Variables used in study

Variables Measured in Survey Administered Prior to Daily Data Collection

Involvement in Work (Kanungo 1982)

6-point agree/disagree response scale

Instructions: Please indicate the extent to which you agree with the following statements:

The most important things that happen to me involve my present job.

To me, my job is only a small part of who I am.

I am very much involved personally in my job.

I live, eat and breathe my job.

Most of my interests are centered around my job.

I have very strong ties with my present job which would be very difficult to break.

Usually I feel detached from my job.

Most of my personal life goals are job-oriented.

I consider my job to be very central to my existence.

I like to be absorbed in my job most of the time.

Involvement in School (adapted from Kanungo 1982)

Instructions: Please indicate the extent to which you agree with the following statements:

The most important things that happen to me involve my coursework and classes this semester.

To me, my coursework and classes this semester are only a small part of who I am.

I am very much involved personally in my coursework and classes this semester.

I live, eat and breathe my coursework and classes this semester.

Most of my interests are centered around my coursework and classes this semester.

Usually I feel detached from my coursework and classes this semester.

I consider my coursework and classes this semester to be very central to my existence.

I like to be absorbed in my coursework and classes this semester most of the time.

Regulatory Focus Scale (adapted from Lockwood et al., 2002) (* indicates prevention focus)

(1-9 scale ranging from "not at all true of me" to "very true of me"

Instructions: Using the scale below, please indicate the appropriate response for each item.

In general, I am focused on preventing negative events in my life.*

I am anxious that I will fall short of my responsibilities and obligations.*

I frequently imagine how I will achieve my hopes and aspirations.

I often think about the person I am afraid I might become in the future.*

I often think about the person I would ideally like to be in the future.

I typically focus on the success I hope to achieve in the future.

I often worry that I will fail to accomplish my goals.*

I often think about how I will achieve success.

I often imagine myself experiencing bad things that I fear might happen to me.*

I frequently think about how I can prevent failures in my life.*

I am more oriented toward preventing losses than I am toward achieving gains.*

My major goal right now is to achieve my ambitions.

My major goal in school right now is to avoid becoming a failure.*

I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.

I see myself as someone who is primarily striving to become the self I "ought" to be—to fulfill my duties, responsibilities, and obligations.*

In general, I am focused on achieving positive outcomes in my life.

I often imagine myself experiencing good things that I hope will happen to me.

Overall, I am more oriented toward achieving success than preventing failure.

Variables Measured Daily

Vigor (adapted from Schaufeli et al., 2006; Shirom & Melamed, 2005b)

(1-6 scale ranging from never to always)

Instructions: The following statements are about how you feel **right now**. Please read each statement carefully and indicate the extent to which you agree or disagree.

I feel bursting with energy

I feel strong and vigorous

I feel energetic

I feel I have physical strength

Recovery (adapted from Sonnentag, 2003)

Instructions: Please indicate how much you agree with the following statements regarding how you feel **right now:**

I feel recovered from everything that happened today

I feel relaxed

I am in a good mood

Fatigue (adapted from Shirom & Melamed, 2005a) (First five items are for physical fatigue, last five are for mental fatigue)

(1-7 scale, ranging from "strongly disagree" to "strongly agree")

Note: Original scale ranged from "never or almost never" to "always or almost always"

Instructions: Please indicate how much you agree with the following statements regarding how you feel **right now:**

I feel tired

I feel physically drained

I feel fed up

I feel like my "batteries" are "dead"

I feel burned out

My thinking process is slow

I have difficulty concentrating

I feel I'm not thinking clearly

I feel I'm not focused in my thinking

I have difficulty thinking about complex things

Daily Recovery Processes (adapted from Sonnentag & Fritz, 2007)

(1-5 scale ranging from "I do not agree at all" to "I fully agree")

General School Detachment

Instructions: Today, during time when I was **not at my job** and was **not doing school-related activities** (going to class, doing homework, studying, etc.)...

I forgot about school

I didn't think about school at all

I distanced myself from my schoolwork

I got a break from the demands of school

General Work Detachment

Instructions: Today, during time when I was **not at my job** and was **not doing school-related activities** (going to class, doing homework, studying, etc.)...

I forgot about my job

I didn't think about my job at all

I distanced myself from my job

I got a break from the demands of my job

Relaxation

Instructions: Today, during time when I was **not at my job** and was **not doing school-related activities** (going to class, doing homework, studying, etc.)...

I kicked back and relaxed

I did relaxing things

I used the time to relax

I took time for leisure

Mastery

Instructions: Today, during time when I was **not at my job** and was **not doing school-related activities** (going to class, doing homework, studying, etc.)...

I learned new things

I sought out intellectual challenges

I did things that challenged me

I did something to broaden my horizons

Detachment from School while at Work

Instructions: Today, during time when I was **at my job…**

I forgot about school

I didn't think about school at all

I distanced myself from my schoolwork

I got a break from the demands of school

Detachment from Work while at School

Instructions: Today, during time when I was **doing school-related activities** (going to class, doing homework, studying, etc.)…

I forgot about my job

I didn't think about my job at all

I distanced myself from my job

I got a break from the demands of my job

Length of Daily Activities

Did you work at your job today? (Y/N)

Did you do school-related activities today (go to class, work on homework, study, etc.)? (Y/N)

How many hours did you work at your job today? (open text box)

Please list the approximate times you worked today, rounded to the nearest hour (for example, 2 PM-6 PM) (open text box)

How many hours did you spend today going to class, working on homework, studying or working on other schoolwork? (open text box)

Please list the approximate times when you were in class, working on schoolwork, studying today or working on other schoolwork (for example, 10 AM-12 PM, 6 PM-10 PM) (open text box)

Perceived Stress (Watson, 1988)

(1-5 scale ranging from "Felt very slightly or not at all" to "Felt very much")

Stress from School

How much stress because of hassles and demands **caused by school** were you under today?

Stress from Work

How much stress **caused by your job** were you under today?

Sleep (adapted from Buysse et al., 1988)

What time did you go to bed last night?[17]

[17] If an individual failed to fill out the morning survey, in the evening survey these questions were asked. However, the two questions were combined and were written, "What time did you go to sleep and what time did you wake up?"

What time did you get up today?

How many hours of actual sleep did you get last night? (This may be different than the number of hours you spent in bed.)

How would you rate your sleep quality last night overall? (Very good, fairly good, farily bad, very bad)

Appendix C: Description of Data Cleaning and Organization

Due to the text boxes used to inquire about hours of sleep, time to bed and time awake, various steps were required to ensure accuracy of data. Initially, when participants failed to indicate any AM or PM designation for the time to bed and time getting up, or seemed to indicate it incorrectly, it was imputed manually according to what seemed most likely (for example, 10-6 was converted to 10 PM-6 AM). Following this, the time in which the morning survey was completed was compared to the imputed time for when the individual got up, and the time that the individual completed the evening survey was compared to the imputed time for when the individual went to bed, as it can be assumed that the time in which they completed the morning and evening survey can be used as a proxy for time they got up and went to bed, respectively, at least in order to verify that the time being used has the appropriate "AM" or "PM" designation. A cutoff of 4 hours was used to determine if the data imputation was appropriate. That is, as long as the time the morning and evening surveys were completed within 4 hours of the imputed time, it was assumed that the imputed time was correct. For example, if an individual listed 7-2 as the time in bed, it could refer to 7 PM to 2 AM, or 7 AM to 2 PM. If the individual completed the evening survey at 3 AM and the morning survey at 5 PM, then it can reasonably be assumed that the 7 AM-2 PM interpretation is correct. In cases where both the morning and evening survey were completed more than 4 hours from the respective time to bed or time awake, then the time stamps were assessed to determine if another time than the one imputed could be possible or seems likely given the timestamp, and a judgment was made. Various other judgments were required for data accuracy, as follows:

- If students ever reported a range of times (10-11), the mid-point of the range was used
- When students indicated any sort of uncertainty (e.g., 10ish) the time they indicated was used (e.g., 10).
- When individuals used a decimal point (6.45), their times to bed and awake were checked to determine if the individual did mean 6.45 or 6 hours and 45 minutes. If there was any uncertainty, the original number the participant entered was used.
- If the individual failed to report number of hours of sleep, then the difference between time awake and time to bed was used as his or her total sleep time
- If an individual inadvertently put time to bed in the hours sleep box, or made other such entry errors, when possible the entered data were used to impute the missing values. For example, if the individual wrote time awake 9 AM, left the box for time to bed blank, and put 2 AM for hours of sleep, then 2 AM was imputed as the time to bed and 7 hours was listed as total sleep time.
- If an individual failed to report the hours of sleep and the data provided could not be used to impute it, then the mean hours of sleep for that individual was imputed.
- If an individual completed the morning survey before getting up and the evening survey after going to bed, then further investigation was conducted to see if the numbers had been inadvertently switched by the individual.

Once the time to bed, time awake and hours of sleep were corrected, the data were filtered in order to ensure that only surveys that were completed before the

individual went to bed were used. On multiple occasions, individuals neglected to take the before-bed survey until the following morning, and on occasion took the survey after going to bed but before getting up, based on the time stamp of the survey and the reported time to bed the individual reported the following morning. Consequently, any evening surveys which the individual completed more than one hour after going to bed were filtered out. One hour was used as the cutoff to account for possible rounding errors. For example, an individual may have taken the evening survey at 1:30 AM right as he was getting into bed, but when asked what time he went to bed simply wrote 1 AM, making it appear that the survey was taken after going to bed when this was not the case. However, if the individual wrote that he went to bed at 1 AM and the time stamp on the survey is 2:30 AM, then it's likely the individual woke up for some reason and remembered the survey and then completed it, thus introducing error into the data (given the state of the individual while taking the survey), and consequently were filtered out. If the individual failed to complete the subsequent morning survey or failed to indicate when he or she went to bed in the subsequent morning survey, then as long as the survey was completed before 5 AM it was used. Evening surveys were filtered out if the evening survey was taken after the time the individual reported getting up, given that this would indicate that the individual failed to complete it before going to bed. For a cutoff for the earliest time an evening survey could be taken, 7 PM was used. Also, for a morning survey to be used, it had to be completed within 4 hours of the individual getting up.

Lastly, when an individual completed two evening or morning surveys on the same day, the one that appeared most likely to be the correct survey was used. This determination was made by looking at the time stamp as well as, when possible, assessing the link that was used. For example, when two surveys were taken, in the majority of cases it was discernable when the respective links were sent to the individual. When the individual took two surveys on the same day, there existed the possibility that for one of the surveys the participant was actually answering the questions for a previous missed day.

Individuals were also asked to report the total hours they had worked at their job and the total number of hours they had done schoolwork. They also were asked to indicate the actual times they had been at work and the times they had done schoolwork. In some cases, the individuals inadvertently switched the boxes, putting the time in the hours box and vice versa. In those cases, the responses were corrected based on the information that they provided.

For the pre-survey, if the individual completed it twice, the first instance of it was used.

Appendix D: Means, Standard Deviations and Intercorrelations of All Study Variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Gender	1.74	0.44		0.029	-0.036	-0.010	0.052	0.008	-0.111	.123*	-0.057	0.052
2. Involvement with School	3.81	0.87	.041*		-0.002	-0.018	.193**	.247**	-.169**	0.082	-0.033	0.000
3. Involvement with Work	2.96	0.89	-0.020	0.004		0.052	.120*	-.144*	0.056	-0.065	0.083	-0.080
4. Prevention Focus	6.05	1.44	-0.003	-0.020	.043*		.364**	-0.036	-0.050	.154*	0.107	-0.046
5. Promotion Focus	7.37	1.17	0.032	.197**	.132**	.327**		0.021	0.096	-0.037	-0.026	-0.019
6. Hours School Per Week	27.01	11.29	-0.020	.249**	-.142**	-.039*	0.005		-.120*	.341**	-0.099	-.132*
7. Hours Worked Per Week	14.05	8.2	-.081**	-.182**	.063**	-.084**	.084**	-.108**		-0.048	.363**	-0.102
8. School Stress	3.01	0.9	.088**	.057**	-.040*	.106**	-.038*	.224**	-.051**		.319**	-.156*
9. Work Stress	1.76	0.6	-0.020	-0.026	.044*	.055**	-0.016	-.052**	.197**	.129**		-0.100
10. Hours Sleep Previous	6.9	0.85	0.026	-0.006	-0.031	-0.019	-0.013	-.072**	-.044*	-.121**	-.047**	
11. Quality of Sleep Previous	1.98	0.39	-.038*	-.095**	0.027	0.027	-.133**	-0.029	0.005	.108**	0.034	-.449**
12. Hours Sleep Subsequent	6.93	0.89	.042*	-0.004	-0.028	-0.017	-0.009	-.078**	-.074**	-.146**	-0.025	.156**
13. Quality of Sleep Subsequent	1.96	0.41	-.040*	-.107**	0.025	0.031	-.124**	-0.021	0.017	.103**	0.026	-0.030
14. General School Detachment	2.6	0.69	-.041*	-.121**	0.030	-0.008	0.017	-.133**	0.005	-.448**	-.046*	.055**
15. Detach. from School (Work)	2.69	0.82	-.095**	-.073**	-0.026	0.024	-0.011	-.117**	-0.002	-.432**	0.016	0.047
16. General Work Detachment	3.50	0.71	-0.004	.041*	-.214**	.077**	.048**	.091**	-.109**	0.000	-.363**	0.023
17. Detach.from Work (School)	3.56	0.75	-.050*	.049*	-.253**	.090**	.064**	.113**	-.103**	.043*	-.332**	0.017
18. Relaxation	3.39	0.63	-.039*	-0.020	-.056**	.047**	.081**	-.135**	-0.010	-.312**	-.159**	.051**
19. Mastery	2.79	0.6	-.065**	.053**	.107**	0.032	.070**	-0.029	0.000	-.078**	-.074**	-0.006
20. Evening Vigor	3.42	0.83	-.056**	.095**	.047*	-0.024	.053**	-0.024	-.048**	-.215**	-.122**	.071**
21. Evening Recovery	4.61	0.78	0.022	.049**	0.003	-.048**	.135**	-.061**	-0.012	-.318**	-.175**	.114**
22. Evening Physical Fatigue	3.96	0.87	-.040*	-.036*	-.047*	.108**	-.110**	.072**	-0.001	.303**	.167**	-.115**
23. Evening Mental Fatigue	3.52	1.07	0.012	-.059**	-0.033	.109**	-.159**	.061**	-0.008	.274**	.119**	-.066**
24. Morning Vigor	3.58	0.97	-.107**	.110**	0.005	-.102**	.070**	0.024	.055**	-.135**	-.057**	.070**
25. Morning Recovery	4.70	0.82	.051**	.072**	-0.010	-.055**	.144**	-0.002	.040*	-.199**	-.084**	.103**
26. Morning Physical Fatigue	3.65	0.98	-0.013	-.097**	-0.028	.144**	-.120**	0.018	-.066**	.202**	.090**	-.110**
27. Morning Mental Fatigue	3.35	1.08	.039*	-.110**	-0.030	.154**	-.154**	0.001	-.055**	.172**	.062**	-.058**

Note: *$p < .05$ **$p < .01$; Hours Sleep/Quality of sleep previous refer to sleep from morning preceding when recovery processes were measured, hours sleep/quality of sleep subsequent refer to sleep from morning after recovery processes were measured; Gender Male=1, Female=2. Correlations above diagonal are calculated by averaging daily measurements for each individual (n=264-268). Correlations below diagonal are calculated by taking correlations using all daily observations (n=1040-3054).

	11	12	13	14	15	16	17	18	19	20
1. Gender	-0.070	0.066	-0.047	-0.047	-.137*	0.014	-0.052	-0.088	-0.102	-0.118
2. Involvement with School	-.186**	0.012	-.228**	-.181**	-0.087	0.052	0.055	-0.028	0.096	.160**
3. Involvement with Work	0.062	-0.042	0.023	0.050	-0.047	-.296**	-.316**	-0.072	.158**	0.079
4. Prevention Focus	0.067	-0.045	0.070	-0.007	0.028	0.100	.124*	0.088	0.040	-0.056
5. Promotion Focus	-.225**	-0.030	-.190**	0.017	-0.010	0.079	0.119	.130*	0.086	0.052
6. Hours School Per Week	-0.048	-.142*	-0.029	-.203**	-0.063	.127*	.137*	-.228**	-0.044	-0.058
7. Hours Worked Per Week	0.010	-.141*	0.028	-0.028	-0.028	-.164**	-0.101	-0.001	-0.007	-0.059
8. School Stress	.138*	-.159**	.127*	-.480**	-.282**	0.020	0.052	-.340**	-.150*	-.278**
9. Work Stress	0.119	-.142*	0.084	-.142*	-0.086	-.357**	-.281**	-.158**	-0.023	-.171**
10. Hours Sleep Previous	-.338**	.864**	-.271**	0.052	0.081	0.070	0.056	0.068	-0.021	0.061
11. Quality of Sleep Previous		-.296**	.929**	-0.093	0.005	-0.116	-0.110	-.196**	-0.048	-.252**
12. Hours Sleep Subsequent	-.053**		-.339**	0.086	0.081	0.050	0.024	0.085	0.029	.122*
13. Quality of Sleep Subsequent	.235**	-.456**		-0.106	0.011	-0.103	-0.088	-.197**	-0.075	-.256**
14. General School Detachment	-.062**	.085**	-.076**		.696**	.344**	.272**	.491**	0.077	.227**
15. Detach. from School (Work)	0.012	.103**	-0.008	.701**		.259**	.304**	.297**	0.047	.241**
16. General Work Detachment	-.056**	0.020	-.044*	.236**	.204**		.909**	.281**	-0.066	0.054
17. Detach.from Work (School)	-0.036	0.008	-.043*	.182**	.218**	.788**		.246**	-0.001	0.029
18. Relaxation	-.092**	.095**	-.146**	.362**	.278**	.204**	.176**		0.043	.228**
19. Mastery	-.045*	-0.005	-0.026	.055**	.081**	0.005	0.019	.078**		.301**
20. Evening Vigor	-.138**	.041*	-.107**	.165**	.144**	.057**	0.037	.235**	.228**	
21. Evening Recovery	-.217**	.100**	-.201**	.252**	.173**	.122**	.124**	.436**	.202**	.552**
22. Evening Physical Fatigue	.190**	-.085**	.137**	-.168**	-.154**	-0.026	-0.015	-.254**	-.135**	-.596**
23. Evening Mental Fatigue	.118**	-.065**	.094**	-.149**	-.179**	-0.012	-0.016	-.210**	-.092**	-.458**
24. Morning Vigor	-.179**	.199**	-.340**	.061**	.064*	-0.021	-0.019	.098**	.122**	.255**
25. Morning Recovery	-.221**	.311**	-.458**	.136**	.098**	.067**	.067**	.231**	.120**	.245**
26. Morning Physical Fatigue	.198**	-.282**	.388**	-.072**	-.077**	0.011	0.013	-.129**	-.071**	-.211**
27. Morning Mental Fatigue	.148**	-.180**	.292**	-.056**	-0.055	0.020	0.014	-.086**	-.048*	-.153**

Note: *$p < .05$ ** $p < .01$; Hours Sleep/Quality of sleep previous refer to sleep from morning preceding when recovery processes were measured, hours sleep/quality of sleep subsequent refer to sleep from morning after recovery processes were measured; Gender Male=1, Female=2. Correlations above diagonal are calculated by averaging daily measurements for each individual (n=264-268). Correlations below diagonal are calculated by taking correlations using all daily observations (n=1040-3054).

	21	22	23	24	25	26	27
1. Gender	0.028	-0.049	0.024	-.186**	0.080	-0.009	0.061
2. Involvement with School	0.080	-0.054	-0.073	.174**	.125*	-.149*	-.157*
3. Involvement with Work	0.014	-0.056	-0.040	-0.004	-0.016	-0.016	-0.031
4. Prevention Focus	-0.092	.183**	.169**	-.172**	-0.097	.210**	.219**
5. Promotion Focus	.196**	-.146*	-.200**	0.049	.203**	-.157*	-.196**
6. Hours School Per Week	-.120*	0.113	0.083	0.031	0.004	0.006	-0.004
7. Hours Worked Per Week	-0.020	-0.008	-0.008	0.072	0.052	-0.087	-0.058
8. School Stress	-.439**	.397**	.374**	-.173**	-.291**	.302**	.278**
9. Work Stress	-.277**	.272**	.208**	-.128*	-.216**	.205**	.181**
10. Hours Sleep Previous	.159**	-.199**	-0.106	.132*	.294**	-.264**	-.147*
11. Quality of Sleep Previous	-.460**	.381**	.187**	-.408**	-.589**	.479**	.331**
12. Hours Sleep Subsequent	.224**	-.239**	-.162**	.224**	.372**	-.325**	-.206**
13. Quality of Sleep Subsequent	-.451**	.355**	.173**	-.456**	-.613**	.491**	.344**
14. General School Detachment	.354**	-.176**	-.178**	0.059	.152*	-0.055	-0.048
15. Detach. from School (Work)	.248**	-.197**	-.179**	0.072	0.095	-0.047	-0.037
16. General Work Detachment	.179**	0.005	0.000	0.006	0.110	0.013	0.013
17. Detach.from Work (School)	.159**	0.021	-0.014	0.011	0.097	0.013	0.014
18. Relaxation	.527**	-.193**	-.215**	0.072	.307**	-0.106	-.121*
19. Mastery	.197**	-.130*	-0.083	.208**	.149*	-0.113	-0.037
20. Evening Vigor	.573**	-.591**	-.430**	.468**	.394**	-.344**	-.269**
21. Evening Recovery		-.628**	-.492**	.304**	.692**	-.443**	-.360**
22. Evening Physical Fatigue	-.599**		.708**	-.368**	-.538**	.705**	.513**
23. Evening Mental Fatigue	-.468**	.670**		-.239**	-.403**	.503**	.730**
24. Morning Vigor	.199**	-.216**	-.156**		.652**	-.699**	-.585**
25. Morning Recovery	.418**	-.312**	-.250**	.608**		-.756**	-.599**
26. Morning Physical Fatigue	-.292**	.407**	.316**	-.669**	-.672**		.744**
27. Morning Mental Fatigue	-.234**	.288**	.449**	-.565**	-.539**	.707**	

Note: *$p < .05$ ** $p < .01$; Hours Sleep/Quality of sleep previous refer to sleep from morning preceding when recovery processes were measured, hours sleep/quality of sleep subsequent refer to sleep from morning after recovery processes were measured; Gender Male=1, Female=2. Correlations above diagonal are calculated by averaging daily measurements for each individual (n=264-268). Correlations below diagonal are calculated by taking correlations using all daily observations (n=1040-3054).

Appendix E: Fit indices across the various options for covariance structures

Table 30.
Fit Indices When Comparing Covariance Structures

			Evening				Morning			
			UN	UNAR	VC	VCAR	UN	UNAR	VC	VCAR
All Days	Vigor	AIC	9543.0	9534.6	9532.7	9525.5	8268.9	8265.3	8245.0	8241.7
		BIC	9661.5	9656.7	9597.3	9593.7	8444.9	8444.9	8320.4	8320.7
	Recovery	AIC	9142.1	9140.4	9136.3	9134.2	8268.9	8265.3	7981.4	7977.2
		BIC	9285.8	9287.6	9204.6	9206.0	8444.9	8444.9	8064.0	8063.3
	Phys.	AIC	9254.0	9234.0	9245.5	9227.0	8268.9	8265.3	7823.2	7809.3
	Fatg.	BIC	9397.6	9381.2	9313.7	9298.9	8444.9	8444.9	7895.0	7884.7
	Ment.	AIC	9743.8	9723.0	9744.5	9723.4	8268.9	8265.3	8275.1	8264.4
	Fatg.	BIC	9862.3	9845.1	9809.2	9791.6	8444.9	8444.9	8354.1	8347.0
School Days	Vigor	AIC	7258.0	7249.8	7248.6	7240.2	6625.9	6620.6	6608.5	6603.1
		BIC	7358.1	7353.5	7312.9	7308.1	6751.0	6749.3	6680.0	6678.2
	Recovery	AIC	7440.9	7426.8	7089.8	7087.8	6624.4	6614.3	6357.7	6354.7
		BIC	7587.5	7577.0	7164.9	7166.5	6749.5	6743.0	6436.3	6436.9
	Phys.	AIC	7258.0	7249.8	6997.8	6980.5	6222.6	6212.1	6205.4	6196.1
	Fatg.	BIC	7358.1	7353.5	7069.4	7055.6	6372.8	6365.9	6280.5	6274.7
	Ment.	AIC	7440.9	7426.8	7434.3	7416.7	6624.4	6614.3	6615.2	6605.9
	Fatg.	BIC	7587.5	7577.0	7505.8	7491.8	6749.5	6743.0	6686.7	6681.0
Work Days	Vigor	AIC	3803.8	3805.5	3799.2	3800.8	3509.3	3510.2	3496.8	3498.2
		BIC	3883.4	3888.5	3858.0	3863.1	3609.6	3614.0	3562.5	3567.4
	Recovery	AIC	3730.8	3732.4	3721.1	3722.4	3464.0	3465.3	3230.6	3229.2
		BIC	3848.4	3853.5	3786.9	3791.6	3585.1	3589.9	3306.7	3308.7
	Phys.	AIC	3735.3	3731.2	3725.9	3720.9	3280.6	3281.6	3281.0	3281.8
	Fatg.	BIC	3832.2	3831.5	3788.1	3786.6	3349.8	3354.2	3339.8	3344.1
	Ment.	AIC	3879.1	3877.1	3861.9	3860.0	3464.0	3465.3	3467.1	3468.2
	Fatg.	BIC	3996.7	3998.2	3927.6	3929.2	3585.1	3589.9	3536.3	3540.8
School/Work Days	Vigor	AIC	3037.8	3039.8	3035.4	3037.4	2861.4	2863.4	2855.6	2857.5
		BIC	3104.4	3109.8	3092.1	3097.4	2944.7	2950.0	2918.9	2924.2
	Recovery	AIC	3014.3	3016.2	2997.9	2999.9	2692.8	2694.6	2660.5	2660.2
		BIC	3110.9	3116.2	3061.2	3066.6	2762.8	2767.9	2730.5	2733.5
	Phys.	AIC	2968.5	2969.7	2964.1	2965.4	2692.8	2694.6	2692.9	2694.6
	Fatg.	BIC	3035.1	3039.7	3020.8	3025.4	2762.8	2767.9	2752.9	2757.9
	Ment.	AIC	3114.0	3114.2	3110.5	3110.7	2692.8	2694.6	2864.9	2866.2
	Fatg.	BIC	3194.0	3197.5	3170.5	3174.0	2762.8	2767.9	2934.9	2939.5

Note. UN is the unstructured option for the covariances of the random effects with the default residual option, UNAR is the unstructured covariance option with an autoregressive structure for the residuals, VC is the variance components option for the covariances of the random effects with the default residual option, VCAR is the variance components option for the covariances of the random effects with the an autoregressive structure for the residuals

Appendix F: Parameter Estimates from Analyses with Full Time Students Working at Least 13.4 Hours per Week

Parameter estimates for recovery processes

Table 31

Parameter Estimates for Positive Well-Being Outcomes across All Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.36	48.69***	3.68	42.45***	4.58	68.98***	4.71	66.18***
Time elapsed[a]			0.27	4.61***			0.08	1.37
Stress school	-.15	-4.15***	-.01	-0.17	-.16	-4.07***	0	-0.08
Stress work	-.06	-1.45	0.01	0.23	-.09	-2.08*	0	0.08
Hours school	-.01	-0.97	0	-0.14	-.02	-1.59	-.01	-0.92
Hours work	-.03	-2.49*	-.01	-0.94	-.03	-2.76**	0	0.26
Hours sleep	-.01	-0.33	0.07	2.52*	-.03	-1.03	0.1	4.05***
Quality sleep	-.14	-2.41*	-.44	-8.21***	-0.1	-2.02*	-.53	-9.01***
Gen. Sch Detach	-.07	-1.53	0.08	1.66^	0.07	1.65^	0.05	1.16
Gen. Wrk Detach	-.03	-0.54	-.11	-2.00*	0.02	0.35	-.02	-0.28
Relaxation	0.14	3.90***	0.05	1.45	0.33	8.51***	0.11	2.72**
Mastery	0.29	7.05***	0.03	0.67	0.29	7.26***	0.16	3.57***

Note. *p<.05, **p<.01 ***p<.001. a. Time between waking up and taking survey.

Table 32

Parameter Estimates for Negative Well-Being Outcomes across All Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Physical Exhaustion				Mental Exhaustion			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4	50.67***	3.59	40.47***	3.58	37.88***	3.29	35.65***
Time elapsed[a]			-.16	-3.08**			-0.2	-3.48***
Stress school	0.19	5.07***	-.02	-0.59	0.17	4.04***	-.04	-1.04
Stress work	0.06	1.43	0.05	1.48	0.11	2.40*	0.02	0.43
Hours school	0.01	0.63	0.01	0.93	0.02	1.50	0.01	1.07
Hours work	0.05	3.94***	0	0.25	0.02	1.47	0	-0.05
Hours sleep	-.03	-1.26	-.12	-4.23***	0.01	0.66	-.07	-2.50*
Quality sleep	0.09	1.90^	0.5	9.02***	0.12	2.13*	0.44	7.13***
Gen. Sch Detach	-.03	-0.76	-.07	-1.71^	-.03	-0.50	-.09	-1.84^
Gen. Wrk Detach	-.04	-0.81	0.05	0.92	0.09	1.82^	0.12	2.43*
Relaxation	-.18	-4.37***	-.06	-1.91^	-.18	-4.08***	-.02	-0.56
Mastery	-.16	-4.10***	-.06	-1.27	-.14	-3.29**	-.11	-2.46*

Note. *p<.05, **p<.01 ***p<.001 ^p<.1. a. Time between waking up and taking survey.

Table 33

Parameter Estimates for Positive Well-Being Outcomes across School Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.32	47.67***	3.64	41.19***	4.53	63.19***	4.66	61.69***
Time elapsed[a]			0.29	4.04***			0.07	1.02
Stress school	-.18	-4.05***	0.01	0.21	-.22	-4.99***	-.03	-0.64
Stress work	-.07	-1.57	0.03	0.69	-.07	-1.42	0.03	0.64
Hours school	-.01	-0.51	0	0.22	-.03	-1.70^	0	0.21
Hours work	-.03	-1.75^	-.03	-1.92^	-.03	-2.05*	0	-0.03
Hours sleep	0.01	0.43	0.07	2.23*	-.01	-0.49	0.11	3.30**
Quality sleep	-0.1	-1.57	-.43	-7.14***	-.07	-1.23	-.49	-7.71***
Gen. Sch Detach	-.05	-.99	0.09	1.60	0.08	1.47	0.07	1.52
Gen. Wrk Detach	0	-.07	-.07	-1.08	0.05	0.73	-.05	-0.83
DetWork@S	-.07	-1.07	-.05	-0.64	-.03	-0.44	0.04	0.74
Relaxation	0.11	2.41*	0.06	1.38	0.3	6.74***	0.12	2.72**
Mastery	0.28	5.84***	-.01	-0.16	0.26	5.83***	0.12	2.41*
Dev. Model 1	3470.0		3168.2		3327.9		3003.6	
Dev. Model 2	3468.9		3164.5		3327.7		3003.1	
ΔDev.(ΔParams.)	1.1(1)		3.7(2)		.2(1)		.5(1)	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Table 34

Parameter Estimates for Negative Well-Being Outcomes across School Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Physical Exhaustion				Mental Exhaustion			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4.02	49.04***	3.6	39.03***	3.62	37.53***	3.31	34.84***
Time elapsed[a]			-.18	-3.10**			-.23	-3.63***
Stress school	0.23	5.09***	-.01	-0.16	0.19	3.58***	-.01	-0.31
Stress work	0.04	0.89	0.03	0.86	0.12	2.68**	0.02	0.40
Hours school	0	-0.01	0	0.26	0.02	1.36	0.01	0.51
Hours work	0.04	2.58*	0.01	0.54	0	0.23	0.01	0.87
Hours sleep	-.04	-1.77^	-.13	-3.87***	-.02	-0.81	-.08	-2.58*
Quality sleep	0.05	0.95	0.48	8.92***	0.1	1.59	0.39	6.73***
Gen. Sch Detach	-.08	-1.57	-.06	-1.32	-.02	-0.28	-.09	-1.54
Gen. Wrk Detach	-0.1	-1.62	0.01	0.25	0.11	1.30	0.13	2.11*
DetWork@S	0.08	1.36	0.02	0.44	0.01	0.14	-.02	-0.28
Relaxation	-0.2	-4.99***	-.09	-2.39*	-.18	-4.32***	-.03	-0.74
Mastery	-.16	-3.58***	-.04	-0.80	-.21	-3.84***	-.09	-1.80^
Dev. Model 1	3379.5		2962.2		3587.4		3127.4	
Dev. Model 2	3377.7		2962.0		3587.4		3121.6	
ΔDev.(ΔParams.)	1.8(1)		.2(1)		0(1)		5.8(2)^	

Note. *p<.05, **p<.01 ***p<.001 ^p<.1 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Table 35

Parameter Estimates for Positive Well-Being Outcomes across Work Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.2	41.09***	3.65	39.94***	4.37	53.19***	4.67	62.26***
Time elapsed[a]			0.23	3.44***			0.03	0.48
Stress school	-.18	-3.60***	0.02	0.35	-.12	-2.56*	-.04	-0.82
Stress work	-.04	-0.80	0.01	0.21	-.11	-1.94^	-.04	-0.65
Hours school	-.01	-0.35	-.02	-1.08	-.05	-2.41*	0	-0.24
Hours work	-.06	-2.15*	0.03	1.04	-.03	-1.28	0.03	1.22
Hours sleep	0	0.13	0.06	1.38	-.02	-0.64	0.08	2.21
Quality sleep	-.05	-0.56	-.48	-6.43***	0.02	0.22	-.63	-8.38***
Gen. Sch Detach	0	0.05	0.12	1.60	0.03	0.40	0.11	1.64
DetSch@W	-.01	-0.14	0	-0.03	-.07	-0.80	-.05	-0.69
Gen. Wrk Detach	0.02	0.28	-.13	-1.51	0.01	0.19	-.05	-0.63
Relaxation	0.14	2.88**	0.01	0.23	0.33	6.02***	0.16	3.40***
Mastery	0.3	5.03***	0.09	1.44	0.34	5.75***	0.15	2.79**
Dev. Model 1	2295.6		2078.3		2269.8		1921.3	
Dev. Model 2	2284.7		2078.3		2256.8		1920.8	
ΔDev.(ΔParams.)	10.9(2)**		0(1)		13(2)**		.5(1)	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. DetSch@W is detachment from school while at work. a. Time between waking up and taking survey.

Table 36

Parameter Estimates for Negative Well-Being Outcomes across Work Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Physical Exhaustion				Mental Exhaustion			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4.21	47.01***	3.65	38.09***	3.74	33.68***	3.3	34.06***
Time elapsed[a]			-.14	-2.00*			-0.2	-2.73**
Stress school	0.14	2.43*	-.05	-1.11	0.14	2.69**	0.01	0.19
Stress work	0.15	2.97**	0.05	1.06	0.2	4.29***	0.07	1.12
Hours school	0.01	0.41	0.01	0.45	0	-0.10	-.01	-0.54
Hours work	0.05	1.95^	-.02	-1.05	0.02	0.71	-.04	-1.43
Hours sleep	-.04	-1.20	-0.1	-2.49*	0	-0.11	-.03	-0.75
Quality sleep	0.09	1.24	0.57	7.34***	0.11	1.32	0.47	5.79***
Gen. Sch Detach	-.04	-0.52	-.22	-3.27**	0.07	1.03	-.26	-3.51***
DetSch@W	0	0.06	0.04	0.60	-0.1	-1.56	0.07	0.76
Gen. Wrk Detach	0.06	0.83	0.11	1.36	0.19	2.18*	0.15	2.02*
Relaxation	-.22	-4.60***	-.09	-1.97*	-.22	-3.69***	-.03	-0.53
Mastery	-.16	-2.78**	-.04	-0.69	-.18	-3.19**	-.11	-1.95^
Dev. Model 1	2277.3		1958.1		2309.8		2056.9	
Dev. Model 2	2273.2		1957.8		2307.4		2048.1	
ΔDev.(ΔParams.)	4.1(2)		.3(1)		2.4(1)		8.8(2)*	

Note. *p<.05, **p<.01 ***p<.001 ^p<.1 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. DetSch@W is detachment from school while at work. a. Time between waking up and taking survey.

Table 37

Parameter Estimates for Positive Well-Being Outcomes across Work/School Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.2	39.42***	3.62	37.06***	4.36	50.95***	4.66	57.62***
Time elapsed[a]			0.25	2.84**			0.02	0.30
Stress school	-.22	-3.88***	0.02	0.31	-.14	-2.25*	-.04	-0.80
Stress work	-.04	-0.65	0.05	0.77	-.12	-2.10*	-.01	-0.17
Hours school	-.01	-0.48	-.01	-0.38	-.04	-1.55	0.01	0.53
Hours work	-.03	-0.93	0.02	0.47	0.01	0.16	0.06	1.92^
Hours sleep	0	-0.02	0.09	2.47*	-.02	-0.63	0.08	1.98*
Quality sleep	-0.1	-1.20	-.44	-5.49***	-.05	-0.58	-.58	-6.89***
Gen. Sch Detach	-.02	-0.19	0.03	0.29	0.06	0.58	0.11	1.40
DetSch@W	0.04	0.38	0.2	2.29*	0.04	0.47	0.09	1.16
Gen. Wrk Detach	0.05	0.52	-.03	-0.34	0.04	0.40	0.01	0.06
DetWork@S	-.08	-0.90	-.08	-0.90	-.02	-0.30	-.03	-0.45
Relaxation	0.11	1.87^	0.04	0.76	0.3	5.61***	0.17	3.39***
Mastery	0.26	3.91***	0.08	1.22	0.24	3.75***	0.13	2.25*
Dev. Model 1	1906.0		1759.8		1869.2		1616.9	
Dev. Model 2	1895.7		1754.2		1865.0		1615.4	
ΔDev.(ΔParams.)	10.3(2)**		5.6(1)*		4.2(2)		1.5(1)	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. DetSch@W is detachment from school while at work. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Table 38

Parameter Estimates for Negative Well-Being Outcomes across Work/School Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Physical Exhaustion				Mental Exhaustion			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4.23	44.69***	3.63	35.38***	3.75	33.88***	3.35	33.01***
Time elapsed[a]			-.15	-2.25*			-.21	-2.54*
Stress school	0.15	2.35*	-.03	-0.53	0.17	2.56*	-.03	-0.57
Stress work	0.13	2.35*	0.04	0.73	0.2	3.70***	0.04	0.59
Hours school	0.01	0.30	0.01	0.35	0	0.02	-.01	-0.60
Hours work	0.03	0.92	-.06	-1.84^	0	-0.10	-.03	-0.97
Hours sleep	-.02	-0.56	-.13	-3.77***	-.01	-0.35	-.07	-1.66^
Quality sleep	0.1	1.27	0.49	5.71***	0.06	0.69	0.42	4.44***
Gen. Sch Detach	-0.1	-1.24	-.14	-1.79^	0.09	1.14	-.23	-2.69**
DetSch@W	-.06	-0.71	-0.1	-1.26	-.17	-2.09*	-.02	-0.25
Gen. Wrk Detach	-.01	-0.12	0.07	0.71	0.22	2.03*	0.11	1.09
DetWrk@S	0.12	1.47	0.02	0.30	0.03	0.34	0	-0.00
Relaxation	-.19	-3.58***	-.09	-1.79^	-.21	-3.46***	-.02	-0.34
Mastery	-0.1	-1.67^	-.02	-0.39	-.19	-2.97**	-.11	-1.69^
Dev. Model 1	1873.5		1663.2		1925.7		1746.4	
Dev. Model 2	1871.1		1661.6		1921.4		1740.8	
ΔDev.(ΔParams.)	2.4(1)		1.6(1)		4.3(1)*		5.6(2)^	

Note. *p<.05, **p<.01 ***p<.001 ^p<.1 Model 1 includes all variables except detachment while at school, Model 2 includes all variables. DetSch@W is detachment from school while at work. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Parameter estimates for regulatory focus hypotheses

Table 39

Relationship between Regulatory Focus and Detachment across All Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Detachment from School		Detachment from Work	
	B	*T*	*B*	*T*
Intercept	2.54	47.68***	3.39	60.62***
Stress school	-.24	-9.59***	-.05	-2.49*
Stress work	-.01	-0.41	-.15	-5.44***
Hours school	-.06	-6.11***	0.01	1.45
Hours work	-.01	-0.76	-.06	-5.86***
Inv. Sch	-.15	-2.41*	-.11	-1.67^
Inv Work	-.03	-0.59	-.31	-5.01***
Prevention Focus	-.04	-0.99	0.05	1.23
Promotion Focus	0.05	1.03	0.14	2.57*
Dev. Model 1	3097.9		2920.1	
Dev. Model 2	3096.2		2910.1	
ΔDev.(ΔParams.)	1.7(2)		10(2)**	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 40

Relationship between Regulatory Focus and Detachment across School Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Detach. from School		Detach. from Work		Detach. from Work (S)	
	B	*T*	*B*	*T*	*B*	*T*
Intercept	2.42	43.11***	3.41	59.28***	3.49	59.08***
Stress school	-.21	-7.33***	-.03	-1.14	0.01	0.58
Stress work	-.01	-0.46	-.16	-5.35***	-.17	-5.20***
Hours school	-.04	-4.22***	0	0.19	0.01	1.27
Hours work	-.01	-0.87	-.06	-5.74***	-.03	-3.37***
Inv. Sch	-.17	-2.56*	-.09	-1.34	-.05	-0.75
Inv Work	-.03	-0.56	-.33	-5.17***	-.32	-4.83***
Prevention Focus	-.05	-1.28	0.04	0.97	0.05	1.08
Promotion Focus	0.06	1.15	0.12	2.04*	0.13	2.21*
Dev. Model 1	2411.0		2215.2		2248.9	
Dev. Model 2	2408.7		2209.0		2241.5	
ΔDev.(ΔParams.)	2.3(2)		6.2(2)*		7.4(2)*	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 41

Relationship between Regulatory Focus and Detachment across Work Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Detach. from School		Detach. from Sch (W)		Detach. from Work	
	B	*T*	*B*	*T*	*B*	*T*
Intercept	2.54	43.76***	2.6	41.61***	3.15	49.94***
Stress school	-.26	-8.17***	-.26	-8.04***	-.05	-1.73^
Stress work	-.01	-0.24	0.06	2.00*	-.12	-4.88***
Hours school	-.05	-3.63***	-.04	-3.00**	0	0.37
Hours work	0	-0.33	-.02	-1.52	-.07	-3.68***
Inv. Sch	-.13	-1.90^	-.15	-2.09*	-.15	-2.00*
Inv Work	-.05	-0.85	0	0.04	-.37	-5.30***
Prevention Focus	-.03	-0.62	-.01	-0.14	0	0.03
Promotion Focus	0.1	1.67^	0.04	0.61	0.13	2.00*
Dev. Model 1	1582.4		1630.8		1489.2	
Dev. Model 2	1579.6		1630.5		1485.1	
ΔDev.(ΔParams.)	2.8(2)		.3(2)		4.1(2)	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 42

Relationship between Regulatory Focus and Detachment across Work/School days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Detach. from School		Detach. from School (W)		Detach. from Work		Detach. from work (S)	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	2.44	38.93***	2.51	37.80***	3.19	48.46***	3.29	50.12***
Stress school	-.21	-6.07***	-.22	-6.67***	-.03	-1.01	0.04	1.31
Stress work	-.01	-0.31	0.05	1.72^	-.14	-5.07***	-.16	-4.38***
Hours school	-.05	-3.25**	-.04	-2.86**	0	0.01	0.01	0.46
Hours work	-.03	-1.79^	-.05	-2.47*	-.07	-3.03**	-.03	-1.35
Inv. Sch	-.12	-1.67^	-.14	-1.78^	-.15	-1.96^	-.07	-0.96
Inv Work	-.04	-0.65	-.01	-0.20	-.39	-5.41***	-.35	-4.95***
Prev. Focus	-.03	-0.60	0	-0.06	-.01	-0.16	0.04	0.92
Prom. Focus	0.09	1.45	0.05	0.73	0.13	1.97^	0.14	2.12*
Dev. Model 1	1288.4		1328.5		1200.5		1342.1	
Dev. Model 2	1286.2		1327.9		1196.6		1335.8	
ΔDev.(ΔPrs.)	2.2(2)		.6(2)		3.9(2)		6.3(2)*	

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 43

Relationship Between Relaxation/Mastery and Regulatory Focus across All Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Relaxation		Mastery	
	B	*T*	*B*	*T*
Intercept	3.35	64.42***	2.85	55.85***
Stress school	-.18	-6.54***	-.04	-1.69^
Stress work	-.12	-3.70***	-.04	-1.49
Hours school	-.04	-3.88***	0	0.10
Hours work	-.04	-4.05***	-.03	-3.20**
Inv. Sch	-.07	-1.12	0.13	2.19*
Inv Work	-.13	-2.22*	0.05	0.85
Prevention Focus	0.05	1.34	0.01	0.19
Promotion Focus	0.06	1.20	0.04	0.84
Dev. Model 1		3573.0		3221.3
Dev. Model 2		3568.8		3220.4
ΔDev.(ΔParams.)		4.2(2)		.9(2)

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 44

Relationship Between Relaxation/Mastery and Regulatory Focus across School Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Relaxation		Mastery	
	B	*T*	*B*	*T*
Intercept	3.29	60.34***	2.83	56.23***
Stress school	-0.2	-6.47***	-.04	-1.29
Stress work	-.12	-3.20**	-.03	-1.01
Hours school	-.04	-3.67***	0	-0.05
Hours work	-.04	-3.62***	-.03	-3.27**
Inv. Sch	-0.1	-1.54	0.09	1.46
Inv Work	-.15	-2.53*	0.03	0.55
Prevention Focus	0.05	1.41	0.01	0.27
Promotion Focus	0.09	1.66	0.08	1.64
Dev. Model 1		2862.3		2590.0
Dev. Model 2		2856.3		2586.9
ΔDev.(ΔParams.)		6(2)*		3.1(2)

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 45

Relationship Between Relaxation/Mastery and Regulatory Focus across Work Days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Relaxation		Mastery	
	B	*T*	*B*	*T*
Intercept	3.19	53.77***	2.73	46.43***
Stress school	-.19	-5.19***	-.05	-1.50
Stress work	-.15	-3.76***	-.04	-1.24
Hours school	-.05	-2.85**	-.01	-0.54
Hours work	-.04	-1.96^	-.02	-0.98
Inv. Sch	-.08	-1.15	0.14	2.11*
Inv Work	-.21	-3.26**	0.04	0.59
Prevention Focus	0.03	0.78	-.04	-0.84
Promotion Focus	0.1	1.61	0.04	0.73
Dev. Model 1		1971.6		1726.0
Dev. Model 2		1967.9		1725.0
ΔDev.(ΔParams.)		3.7(2)		1(2)

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Table 46

Relationship Between Relaxation/Mastery and Regulatory Focus across Work/School days for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Relaxation		Mastery	
	B	*T*	*B*	*T*
Intercept	3.17	50.63***	2.73	46.70***
Stress school	-0.2	-4.96***	-.05	-1.58
Stress work	-.15	-3.73***	-.06	-1.63
Hours school	-.05	-2.62**	0	-0.13
Hours work	-.04	-1.77^	-.01	-0.66
Inv. Sch	-0.1	-1.35	0.12	1.73^
Inv Work	-.21	-3.18**	0.05	0.72
Prevention Focus	0.04	0.80	-.03	-0.60
Promotion Focus	0.09	1.35	0.04	0.64
Dev. Model 1		1632.2		1450.9
Dev. Model 2		1629.1		1450.2
ΔDev.(ΔParams.)		3.1(2)		.7(2)

Note. *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except regulatory focus variables, Model 2 includes all variables. Inv. Sch is involvement with school. Inv. Work is involvement with work.

Parameter estimates for interaction between prevention focus and detachment

Table 47

Parameter Estimates for Positive Well-Being Outcomes across All Days for Interaction of Detachment with Prevention Focus for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.36	49.63***	3.68	43.57***	4.57	70.93***	4.7	67.21***
Time elapsed[a]			0.27	4.51***			0.08	1.39
Stress school	-.15	-4.11***	-.01	-0.15	-.15	-4.00***	-.01	-0.18
Stress work	-.06	-1.47	0.01	0.28	-.09	-2.12*	0	0.05
Hours school	-.01	-0.95	0	-0.10	-.02	-1.66^	-.01	-0.89
Hours work	-.03	-2.46*	-.01	-0.91	-.03	-2.77**	0	0.23
Hours sleep	-.01	-0.32	0.07	2.41*	-.03	-1.06	0.1	4.14***
Quality sleep	-.14	-2.47*	-.45	-8.30***	-0.1	-2.04*	-.52	-8.93***
Gen. Sch Detach	-.06	-1.31	0.09	1.95^	0.07	1.55	0.05	0.96
Gen. Wrk Detach	-.03	-0.53	-.11	-1.86^	0	0.07	-.01	-0.26
Relaxation	0.14	3.85***	0.05	1.35	0.33	8.47***	0.12	2.80**
Mastery	0.29	6.96***	0.03	0.59	0.28	7.21***	0.16	3.61***
Prevention Focus	-0.1	-2.25*	-.15	-2.66**	-.12	-2.73**	-.09	-1.97^
DetSch*Prev Focus	-.03	-1.23	-.05	-1.79^	0.01	0.20	0.05	1.63
DetWork*Prev Focus	0.01	0.44	0	-0.00	0.05	1.56	-.05	-1.36
Dev. Model 1	4315.2		3759.0		4159.1		3582.5	
Dev. Model 2	4313.7		3755.8		4156.5		3578.5	
ΔDev.(ΔParams.)	1.5(2)		3.2(2)		2.6(2)		4(2)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. a. Time between waking up and taking survey.

Table 48

Parameter Estimates for Negative Well-Being Outcomes across All Days for Interaction of Detachment with Prevention Focus for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Physical Exhaustion				Mental Exhaustion			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4	52.28***	3.59	41.95***	3.58	38.54***	3.29	36.46***
Time elapsed[a]			-.16	-3.00**			-0.2	-3.43***
Stress school	0.19	5.05***	-.02	-0.63	0.17	3.99***	-.04	-1.04
Stress work	0.06	1.46	0.05	1.54	0.11	2.43*	0.02	0.45
Hours school	0.01	0.72	0.01	1.03	0.02	1.53	0.01	1.10
Hours work	0.05	3.98***	0	0.30	0.02	1.46	0	-0.03
Hours sleep	-.03	-1.20	-.12	-4.34***	0.02	0.67	-.07	-2.54*
Quality sleep	0.09	1.91^	0.49	8.95***	0.13	2.15*	0.44	7.11***
Gen. Sch Detach	-.02	-0.53	-.06	-1.39	-.03	-0.52	-.09	-1.75^
Gen. Wrk Detach	-.03	-0.58	0.06	1.12	0.1	1.95^	0.12	2.46*
Relaxation	-.18	-4.41***	-.07	-2.00*	-.18	-4.09***	-.02	-0.59
Mastery	-.16	-4.10***	-.06	-1.31	-.14	-3.24**	-.11	-2.46*
Prevention Focus	0.15	2.85**	0.18	3.01**	0.13	2.13*	0.15	2.36*
DetSch*Prev Focus	-.02	-0.90	-.04	-1.62	0.01	0.27	-.01	-0.47
DetWork*Prev Focus	-.03	-0.89	-.02	-0.67	-.02	-0.78	-.01	-0.17
Dev. Model 1	4192.8		3509.0		4450.3		3697.2	
Dev. Model 2	4191.0		3505.7		4449.6		3697.0	
ΔDev.(ΔParams.)	1.8(2)		3.3(2)		.7(2)		.2(2)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. a. Time between waking up and taking survey.

Table 49

Parameter Estimates for Positive Well-Being Outcomes across School Days for Interaction of Detachment with Prevention Focus for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.32	48.58***	3.63	42.46***	4.53	64.76***	4.66	62.81***
Time elapsed[a]			0.29	3.96***			0.07	1.06
Stress school	-.18	-4.03***	0.01	0.18	-.21	-5.00***	-.03	-0.70
Stress work	-.07	-1.54	0.03	0.76	-.07	-1.43	0.03	0.63
Hours school	-.01	-0.53	0	0.20	-.03	-1.80^	0	0.17
Hours work	-.03	-1.69^	-.03	-1.91^	-.03	-2.06*	0	-0.03
Hours sleep	0.01	0.47	0.07	2.21*	-.01	-0.46	0.11	3.46***
Quality sleep	-0.1	-1.61	-.43	-7.20***	-.07	-1.20	-.49	-7.61***
Gen. Sch Detach	-.05	-.96	0.1	1.66^	0.07	1.32	0.07	1.34
Gen. Wrk Detach	0.02	0.27	-.05	-0.78	0.07	0.99	-.03	-0.51
DetWork@S	-.1	-1.56	-.06	-0.83	-.07	-1.08	0.02	0.34
Relaxation	0.11	2.34*	0.05	1.31	0.3	6.76***	0.12	2.74**
Mastery	0.27	5.74***	-.01	-0.22	0.25	5.80***	0.12	2.36*
Prevention Focus	-0.1	-2.09*	-.17	-2.80**	-.12	-2.51*	-.12	-2.25*
DetSch*Prev Focus	-.04	-1.09	-.04	-1.07	0.01	0.17	0.03	0.94
DetWork*Prev Focus	-.02	-0.54	-.03	-0.70	-.02	-0.50	-.05	-1.24
DetWork@S* PrevFocus	0.09	2.26*	0.05	0.97	0.11	2.99**	0.08	2.01*
Dev. Model 1	3464.6		3156.8		3321.5		2998.2	
Dev. Model 2	3458.5		3154.7		3312.0		2993.1	
ΔDev.(ΔParams.)	6.1(3)		2.1(3)		9.5(3)*		5.1(3)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Table 50

Parameter Estimates for Negative Well-Being Outcomes across School Days for Interaction of Detachment with Prevention Focus for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Physical Exhaustion				Mental Exhaustion			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4.03	50.50***	3.61	40.67***	3.63	38.07***	3.31	35.81***
Time elapsed[a]			-.18	-3.05**			-.23	-3.59***
Stress school	0.23	5.08***	-.01	-0.17	0.19	3.55***	-.01	-0.32
Stress work	0.05	0.96	0.04	0.92	0.12	2.67**	0.02	0.47
Hours school	0	0.09	0	0.33	0.02	1.39	0.01	0.58
Hours work	0.04	2.57*	0.01	0.57	0	0.20	0.01	0.90
Hours sleep	-.04	-1.77^	-.13	-4.00***	-.02	-0.83	-.09	-2.72**
Quality sleep	0.05	0.93	0.47	8.83***	0.1	1.60	0.39	6.66***
Gen. Sch Detach	-.07	-1.44	-.06	-1.23	-.01	-0.27	-.09	-1.48
Gen. Wrk Detach	-0.1	-1.53	0.02	0.34	0.09	1.12	0.14	2.09*
DetWork@S	0.09	1.54	0.03	0.48	0.04	0.55	-.01	-0.16
Relaxation	-0.2	-5.02***	-.09	-2.39*	-.18	-4.30***	-.03	-0.74
Mastery	-.16	-3.56***	-.04	-0.76	-.2	-3.81***	-.09	-1.78^
Prevention Focus	0.15	2.66**	0.19	3.12**	0.12	1.89^	0.16	2.49*
DetSch*Prev Focus	-.02	-0.57	-.02	-0.55	0.02	0.47	-.04	-0.93
DetWork*Prev Focus	-.01	-0.36	-.02	-0.51	0	.05	-.01	-0.31
DetWork@S* PrevFocus	-.04	-1.10	-.02	-0.47	-.07	-1.73^	-.04	-0.76
Dev. Model 1	3370.8		2952.7		3583.9		3115.6	
Dev. Model 2	3368.1		2951.4		3580.5		3113.6	
ΔDev.(ΔParams.)	2.7(3)		1.3(3)		3.4(3)		2(3)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Table 51

Parameter Estimates for Positive Well-Being Outcomes across Work Days for Interaction of Detachment with Prevention Focus for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.19	42.37***	3.65	40.62***	4.36	56.26***	4.67	62.43***
Time elapsed[a]			0.21	3.20**			0.02	0.33
Stress school	-.18	-3.59***	0.02	0.30	-.12	-2.56*	-.04	-0.80
Stress work	-.04	-0.87	0.01	0.16	-.12	-1.97*	-.04	-0.61
Hours school	-.01	-0.32	-.02	-0.96	-.05	-2.31*	-.01	-0.29
Hours work	-.06	-2.15*	0.03	1.13	-.03	-1.16	0.03	1.17
Hours sleep	0	0.09	0.05	1.16	-.02	-0.78	0.08	2.11*
Quality sleep	-.05	-0.58	-.48	-6.57***	0.01	0.18	-.63	-8.33***
Gen. Sch Detach	0	-0.06	0.13	1.77^	0.02	0.19	0.12	1.73^
DetSch@W	0	0.01	0.01	0.09	-.05	-0.60	-.05	-0.78
Gen. Wrk Detach	0.02	0.21	-0.1	-1.16	0.01	0.10	-.04	-0.47
Relaxation	0.14	2.89**	0.01	0.13	0.33	6.07***	0.16	3.37***
Mastery	0.3	4.96***	0.07	1.17	0.33	5.64***	0.15	2.73**
Prevention Focus	-.15	-2.95**	-.13	-2.07*	-.21	-3.97***	-.07	-1.27
DetSch*Prev Focus	0.03	0.62	-.12	-2.46*	-.01	-0.25	-.06	-1.47
DetSch@W*Prev Focus	-.05	-0.88	-.01	-0.30	-.04	-0.74	0.03	0.80
DetWork*Prev Focus	0.03	0.54	-.02	-0.38	0.1	2.16*	0.01	0.22
Dev. Model 1	2276.2		2073.9		2241.8		1919.1	
Dev. Model 2	2274.9		2064.7		2236.5		1917.0	
ΔDev.(ΔParams.)	1.3(3)		9.2(3)*		5.3(3)		2.1(3)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. DetSch@W is detachment from school while at work. a. Time between waking up and taking survey.

Table 52

Parameter Estimates for Negative Well-Being Outcomes across Work Days for Interaction of Detachment with Prevention Focus for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Physical Exhaustion				Mental Exhaustion			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4.21	50.06***	3.66	39.36***	3.74	34.92***	3.3	34.86***
Time elapsed[a]			-.14	-1.96^			-.19	-2.57*
Stress school	0.14	2.50*	-.05	-1.08	0.15	2.87**	0.01	0.20
Stress work	0.15	3.06**	0.05	1.06	0.21	4.42***	0.06	1.09
Hours school	0.01	0.31	0.01	0.48	-.01	-0.31	-.01	-0.53
Hours work	0.05	1.89^	-.02	-1.01	0.01	0.53	-.04	-1.42
Hours sleep	-.04	-1.14	-0.1	-2.58*	0	-0.07	-.03	-0.65
Quality sleep	0.1	1.32	0.57	7.34***	0.12	1.41	0.48	5.78***
Gen. Sch Detach	-.03	-0.40	-.22	-3.23**	0.09	1.28	-.27	-3.64***
DetSch@W	-.02	-0.21	0.04	0.65	-.14	-2.05*	0.07	0.80
Gen. Wrk Detach	0.06	0.84	0.12	1.46	0.19	2.26*	0.14	1.89^
Relaxation	-.22	-4.60***	-.09	-2.00*	-.22	-3.62***	-.02	-0.46
Mastery	-.15	-2.63**	-.04	-0.70	-.17	-3.04**	-.11	-1.91^
Prevention Focus	0.23	3.96***	0.18	2.88**	0.22	3.02**	0.15	2.30*
DetSch*Prev Focus	-.02	-0.47	-.03	-0.81	-.06	-1.36	0.04	0.82
DetSch@W*Prev Focus	0.09	1.84^	0	0.04	0.11	2.77**	-.02	-0.38
DetWork*Prev Focus	-.01	-0.29	0	-0.05	-.01	-0.16	0.03	0.57
Dev. Model 1	2258.4		1949.8		2298.6		2042.8	
Dev. Model 2	2255.0		1949.0		2290.8		2041.6	
ΔDev.(ΔParams.)	3.4(3)		.8(3)		7.8(3)^		1.2(3)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. DetSch@W is detachment from school while at work. a. Time between waking up and taking survey.

Table 53

Parameter Estimates for Positive Well-Being Outcomes across Work/School Days for Interaction of Detachment with Prevention Focus for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Vigor				Recovery			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	3.2	40.68***	3.62	37.70***	4.36	53.51***	4.66	57.33***
Time elapsed[a]			0.24	2.74**			0.03	0.44
Stress school	-.21	-3.84***	0.02	0.34	-.14	-2.25*	-.03	-0.66
Stress work	-.03	-0.56	0.05	0.88	-.11	-1.97*	0	-0.00
Hours school	-.01	-0.50	-.01	-0.48	-.04	-1.58	0.01	0.39
Hours work	-.03	-0.94	0.02	0.47	0	0.14	0.06	1.77^
Hours sleep	0	-0.06	0.09	2.43*	-.02	-0.71	0.08	2.14*
Quality sleep	-0.1	-1.21	-.44	-5.44***	-.05	-0.63	-.56	-6.70***
Gen. Sch. Detach	0	-0.00	0.02	0.24	0.07	0.74	0.12	1.56
DetSch@W	0.03	0.27	0.2	2.22*	0.03	0.35	0.06	0.74
Gen. Wrk Detach	0.06	0.58	0	0.03	0.06	0.61	0.02	0.24
DetWork@S	-.09	-1.02	-.11	-1.27	-.05	-0.62	-.07	-0.93
Relaxation	0.11	1.92^	0.04	0.65	0.31	5.78***	0.18	3.50***
Mastery	0.26	3.93***	0.09	1.34	0.24	3.76***	0.14	2.48*
Prevention Focus	-.15	-2.81**	-.14	-2.09*	-.21	-3.62***	-.05	-0.82
DetSch*Prev Focus	0.02	0.29	-.13	-2.15*	-.07	-1.00	-.04	-0.78
DetSch@W*Prev Focus	-.04	-0.62	0.12	2.23*	-.03	-0.45	0.11	2.21*
DetWork*Prev Focus*Prev	-.04	-0.56	0	0.07	-.03	-0.41	0.01	0.12
DetWork@S* Prev Focus	0.07	1.26	0.01	0.17	0.1	1.80^	0.12	2.21*
Dev. Model 1	1888.0		1749.8		1852.4		1614.9	
Dev. Model 2	1886.2		1742.7		1848.0		1602.7	
ΔDev.(ΔParams.)	1.8(4)		7.1(4)		4.4(4)		12.2(4)*	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. DetSch@W is detachment from school while at work. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Table 54

Parameter Estimates for Negative Well-Being Outcomes across Work/School days for Interaction of Detachment with Prevention Focus for Full-Time Students Who Worked at Least 13.4 Hours per Week

	Physical Exhaustion				Mental Exhaustion			
	Bedtime		Next morning		Bedtime		Next morning	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	4.22	47.08***	3.63	36.25***	3.74	34.68***	3.35	33.57***
Time elapsed[a]			-.15	-2.33*			-.22	-2.65**
Stress school	0.16	2.41*	-.03	-0.62	0.18	2.70**	-.03	-0.60
Stress work	0.13	2.39*	0.03	0.64	0.2	3.72***	0.03	0.39
Hours school	0.01	0.29	0.01	0.44	0	-0.01	-.01	-0.58
Hours work	0.03	0.89	-.06	-1.75^	-.01	-0.26	-.03	-0.93
Hours sleep	-.02	-0.57	-.13	-3.90***	-.01	-0.40	-.08	-1.82^
Quality sleep	0.1	1.23	0.48	5.60***	0.05	0.68	0.4	4.23***
Gen. Sch Detach	-0.1	-1.19	-.15	-1.90^	0.09	1.12	-.25	-2.86**
DetSch@W	-.07	-0.82	-.08	-0.99	-.18	-2.19*	-.01	-0.05
Gen. Wrk Detach	-.01	-0.08	0.07	0.67	0.23	2.11*	0.1	1.05
DetWork@S	0.1	1.23	0.04	0.51	-.01	-0.09	0.01	0.08
Relaxation	-.19	-3.58***	-.09	-1.78^	-.22	-3.49***	-.02	-0.44
Mastery	-0.1	-1.61	-.03	-0.47	-.18	-2.85**	-.11	-1.73^
Prevention Focus	0.23	3.61***	0.16	2.33*	0.18	2.46*	0.13	1.89^
DetSch*Prev Focus	-.02	-0.29	-.02	-0.41	-.04	-0.64	0.01	0.19
DetSch@W* Prev Focus	0.04	0.86	-.05	-1.06	0.11	2.10*	-.02	-0.36
DetWork*Prev Focus*Prev	-.01	-0.20	0	-0.06	0.04	0.46	0.07	0.96
DetWork@S* Prev Focus	0.02	0.32	-.06	-1.21	0	0.07	-.13	-2.23*
Dev. Model 1	1858.7		1656.7		1915.4		1737.3	
Dev. Model 2	1857.6		1652.3		1910.5		1732.0	
ΔDev.(ΔParams.)	1.1(4)		4.4(4)		4.9(4)		5.3(4)	

Note. ^p<.10 *p<.05, **p<.01 ***p<.001 Model 1 includes all variables except interactions terms. Model 2 includes all variables. DetSch@W is detachment from school while at work. DetWork@S is detachment from work while at school. a. Time between waking up and taking survey.

Appendix G: Description of Interaction Effects

Results and Graphs of Interaction Effects

Given that the majority of the interactions were not significant (there were a total of 192 interactions tested and only 16 were significant at the $p < .05$ level), the main conclusion regarding the interaction analyses is that prevention focus does not seem to interact with detachment from school and detachment from work to influence well-being.

In assessing the impact of the interaction between prevention focus and general detachment from school across the various ways of considering the data, only two significant correlations were found: the interaction between general detachment from school and prevention focus was significantly related to morning vigor when considering full-time students working 13.4 hours or more on days when they went to work ($p = .014$) and on days when they went to both work and school ($p = .032$). In order to probe the significant interactions, an online calculator was used (Preacher, Curran, & Bauer, 2006). The online calculator finds the confidence bands of the moderator, which are the regions of the moderator at which the slope of the regression line is significant. In order to obtain the parameter estimates and covariance terms needed to calculate the region of significance, the analyses were re-run with all variables and covariates and the interaction term of interest, while leaving out the other interaction terms, due to the interpretational problems created by having the same variables in more than one interaction term in the equation (Bauer & Curran, 2005).

In probing the interaction for days on which the individual went to work, the upper and lower bound of regions of significance for the moderator were -.13 and

3.67[18], respectively. That is, when prevention focus was less than -.13 or greater than 3.67, the relationship between general school detachment and prevention focus was significant. However, when interpreting the regions of significance, it is important to consider the actual range of values of the moderator. In the example that Bauer and Curran (2005) provide for probing interaction effects, they point out that if the upper or lower bound of the moderator lies outside of the range of observed data, then it does not need to be interpreted. The actual range of centered prevention focus was approximately -4 to 3[19], which means that any time a confidence band was greater than 3 or less than -4, I did not interpret it. For example, as stated previously, for days on which the individual went to work, for individuals with a prevention focus score greater than 3.67, general school detachment was related to morning vigor. However, for no individual in this study was the prevention focus score greater than 3, meaning that only the lower bound was interpretable. Specifically, for individuals with a prevention focus below -.13, higher detachment was related to increased vigor (see Figure 1), which did not support Hypothesis 8.

For days when the individual worked and did schoolwork, when the model was run with only the interaction of interest (the interaction between general school detachment and prevention focus), the interaction was no longer significant. As stated previously, for probing interactions it is important that the variables of interest are only used in one interaction term. Consequently, it appears that the interaction between general school detachment and prevention focus is dependent on the other interactions.

[18] Prevention focus was centered around the mean of all scores, which is why negative scores are possible
[19] Centering was re-done for each analysis. Thus, the range of data was different for analyses looking at all days versus analyses looking at only days individuals went to school, etc.

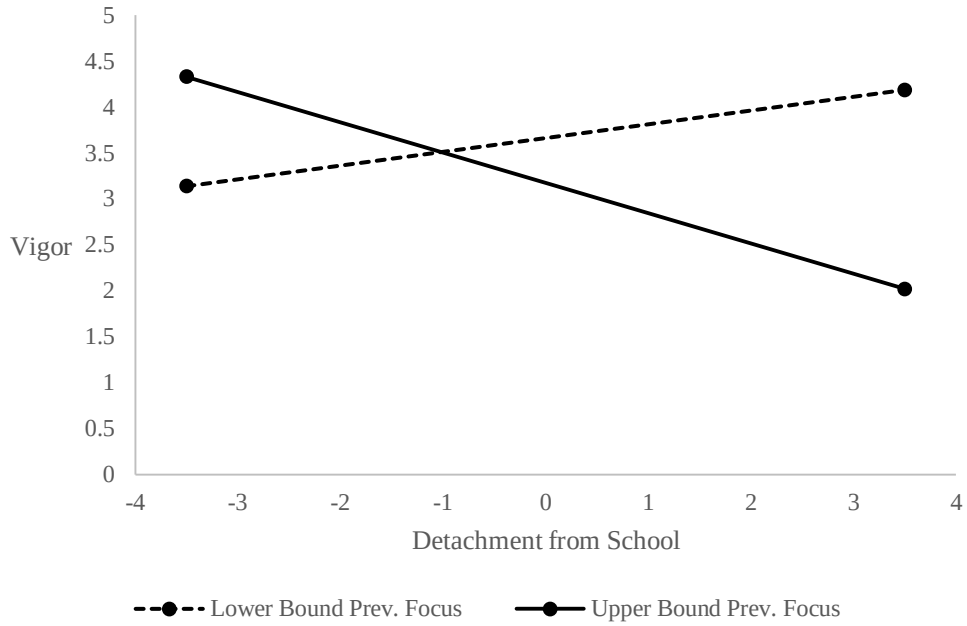


Figure 1. Interaction between detachment from school and prevention focus on morning vigor for days when individuals worked for full-time students who worked at least 13.4 hours per week. Lower bound of prevention focus (-.13) was within the range of observed data while the upper bound (3.67) was not.

In assessing the interaction between detachment from school while at work and prevention focus, significant interactions were found only when assessing those full-time students who worked more than 13.4 hours. Specifically, for evening mental fatigue a significant interaction was found between detachment from school while at work and prevention focus for days when individuals worked (p = .006) and days when individuals worked and went to school (p = .036). Probing these interactions revealed that detachment from school while at work was negatively related to mental fatigue, but only for those individuals low in prevention focus (see Figures 2 and 3).

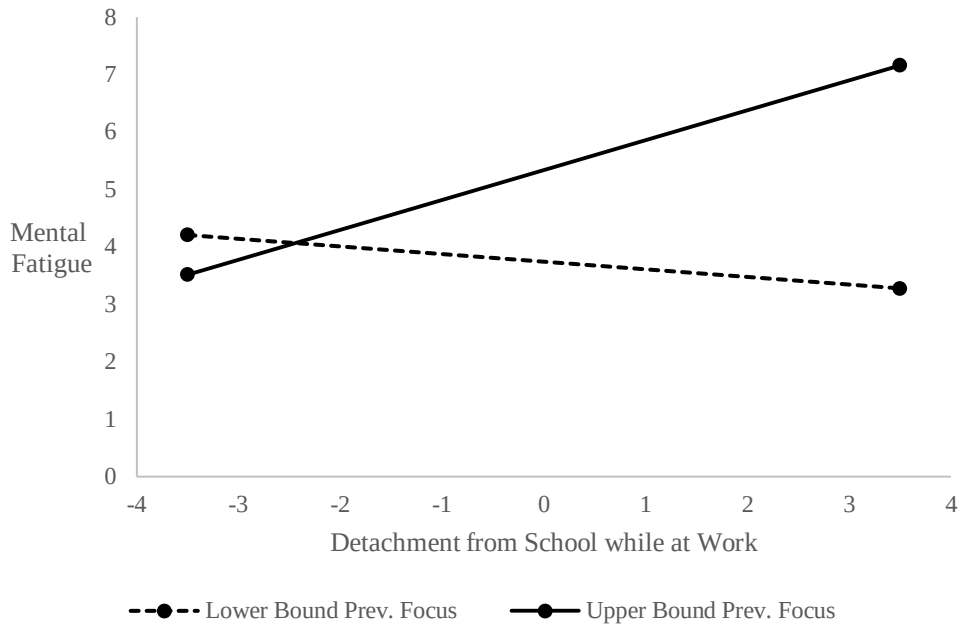


Figure 2. Interaction between detachment from school while at work and prevention focus on evening mental fatigue for days when individuals worked for individuals working at least 13.4 hours per week. Lower bound of prevention focus was .03, which was within range of observed data, and upper bound was 7.21 which was outside range of observed data.

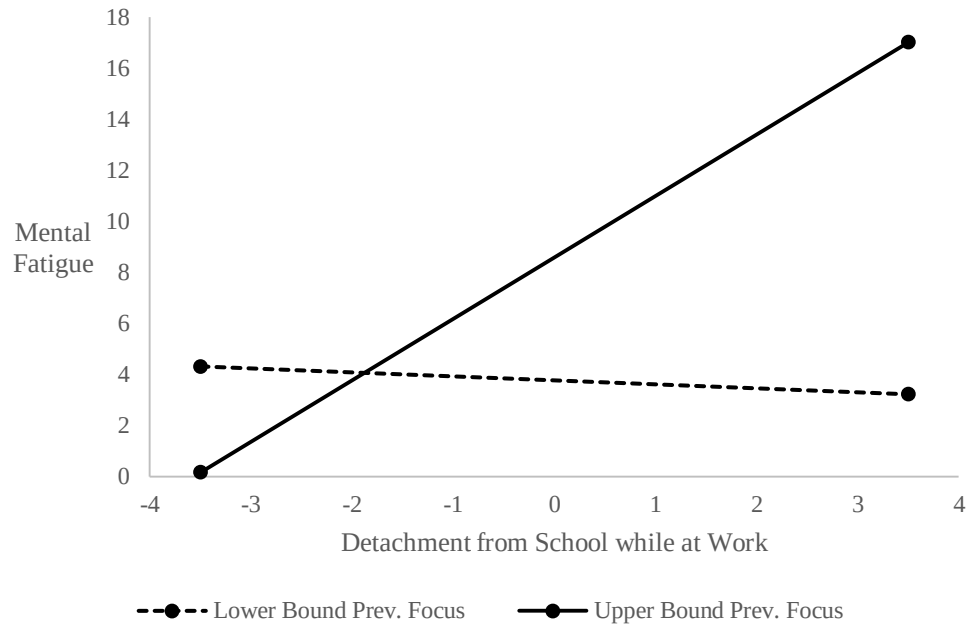


Figure 3. Interaction between detachment from school while at work and prevention focus on evening mental fatigue on days when individuals worked and went to school for full-time students working at least 13.4 hours per week. Lower bound was .20, which was within range of observed data, and upper bound was 26.2, which was outside of range of observed data.

For detachment from school while at work for full time students working at least 13.4 hours per week, a significant interaction was also found for morning recovery for days when individuals worked and went to school (p = .028). Probing this interaction revealed that detachment from school while at work was significantly related to recovery, but only for individuals high in prevention focus, which supported the hypothesis (see Figure 4). There was also a significant interaction between detachment from school while at work and morning vigor on days when individuals worked and went to school, but when the model was tested with only the one interaction term, it was not significant anymore.

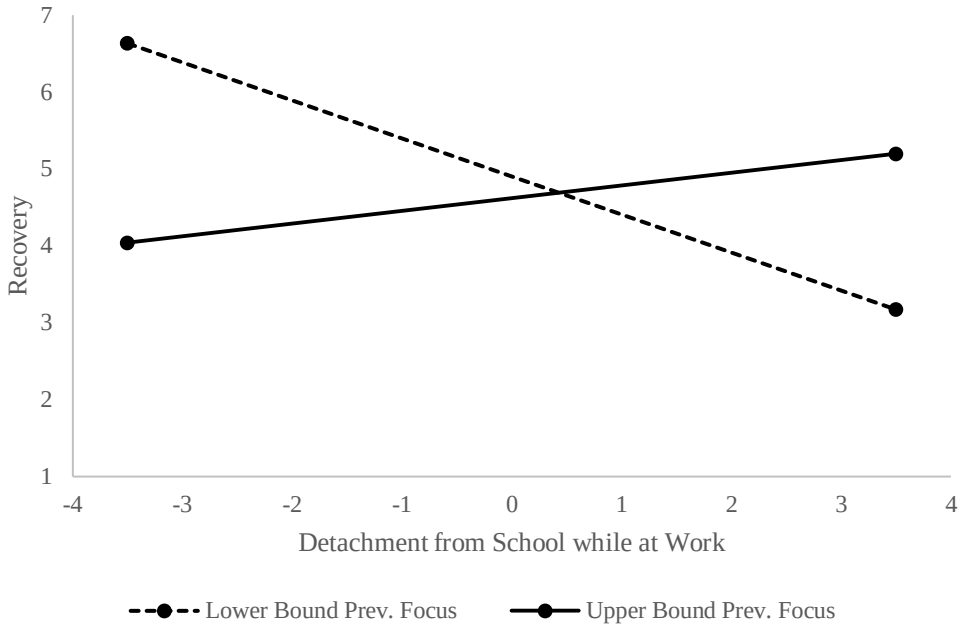


Figure 4 . Interaction between detachment from school while at work and prevention focus for days when the individual went to school and worked on morning recovery for individuals working at least 13.4 hours per week. Lower bound for prevention focus was -5.52 which was outside the range of observed data, upper bound was .76 which was inside the range of observed data.

One final significant interaction that was found for detachment from school while at work for full time students working at least 13.4 hours per week was for morning vigor on days when individuals went to work and school (p = .027). When the other interactions were removed, this interaction was not significant anymore. However, when the non-significant interaction was probed, a region of significance was still found, with the area of significance falling *within* the upper and lower bound. Essentially, this indicated that for individuals with a prevention focus above -.23 (essentially a prevention focus above the mean), detachment from school while at work was related to higher levels of vigor, which supported Hypothesis 8 (see Figure 5).

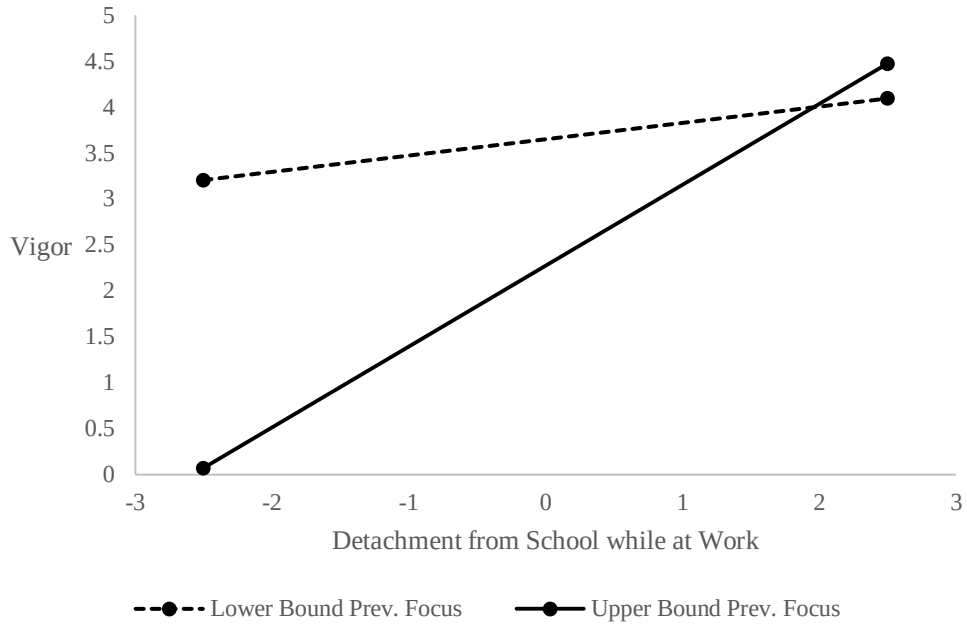


Figure 5. Interaction between detachment from school while at work and prevention focus for days when the individual went to school and worked on morning vigor for individuals working at least 13.4 hours per week. Lower bound for prevention focus was -.23, which was within the range of observed data, and the upper bound was 9.3, which was outside of the range of observed data. Note that the area of significance was between the upper and lower bound, as opposed to outside of it as was the case for all other significant interactions.

Two significant interactions were found between prevention focus and general detachment from work. One of the interactions was for evening recovery when looking at the full data set on all days (p = .028). Probing the interaction revealed that for individuals low in prevention focus, increased levels of detachment were related to lower levels of recovery, similar to the main effect findings, which did not support Hypothesis 8 (see Figure 6). The other significant interaction was for morning recovery when analyzing the full data set for days when participants did schoolwork (p = .006). However, when the model was run again with the other interaction terms removed, the interaction between detachment from work and prevention focus was no longer significant.

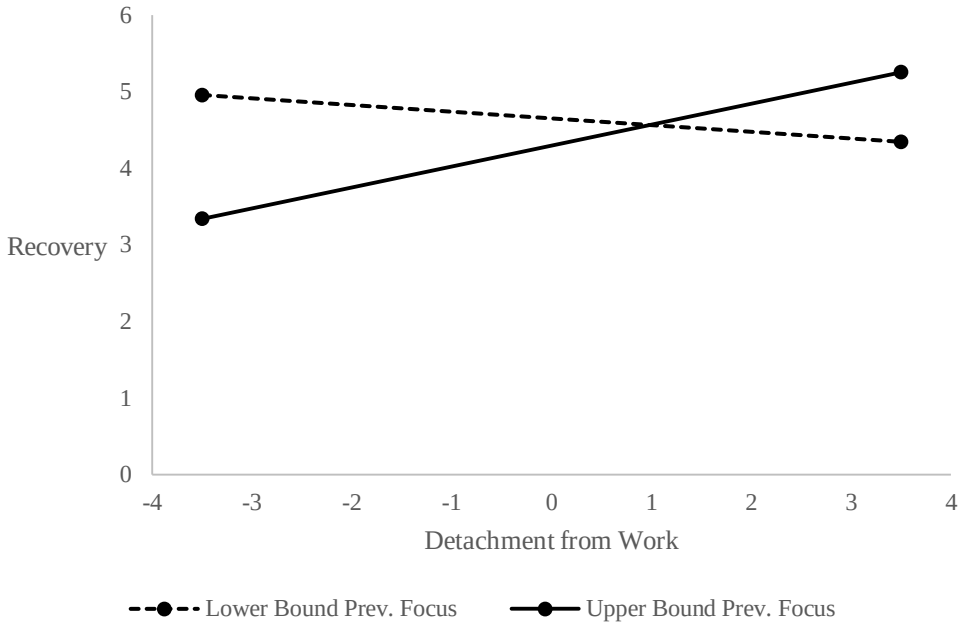


Figure 6. Interaction between general detachment from work and prevention focus on evening recovery for all days for all individuals. Lower bound was prevention focus was -1.21, which was within range of observed data, and upper bound was 6.45, which was outside of range of observed data.

For detachment from work while at school, a similar finding to general detachment from work was detected, in that among those low in prevention focus who worked at least 13.4 hours per week, there was a negative relationship between detachment from work while at school and evening vigor on days the individual participated in schoolwork (p = .024) (see Figure 7).

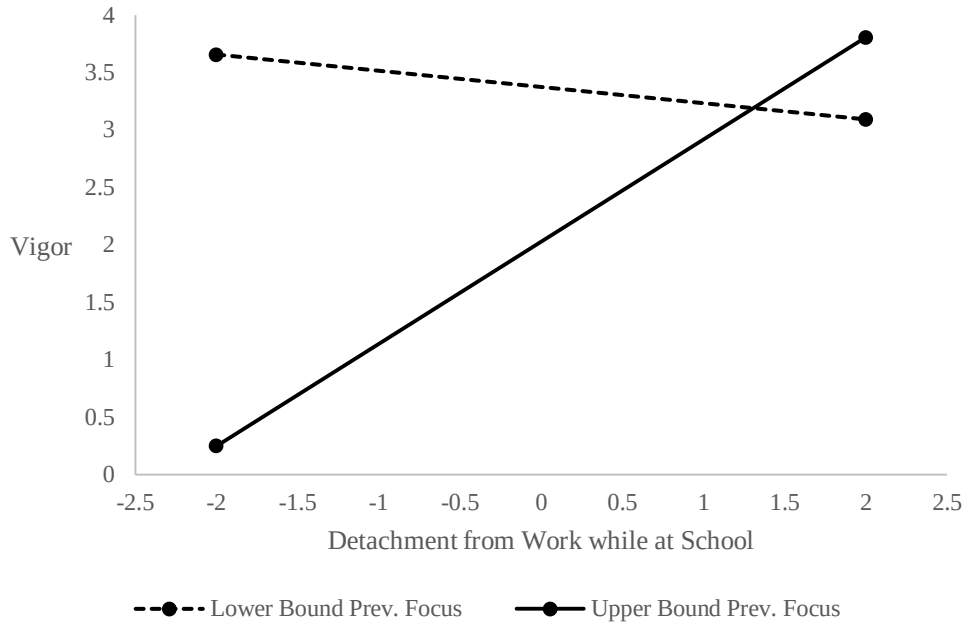


Figure 7 . Interaction between detachment from work while at school and prevention focus for evening vigor for days when individuals went to school for individuals working at least 14.3 hours per week. Lower bound was -.59, which was within the rage of observed data, and upper bound was 13.2, which was outside of the range of observed data.

The interaction of detachment from work while at school and prevention focus was also significant for both morning and evening recovery. Specifically, across all participants significant interactions were found between prevention focus and detachment from work while at school for evening recovery when looking at days when individuals worked and went to school. The interaction was also significant for morning recovery when looking at days when individuals went to school and was also significant when looking at days when individuals went to work and school. When looking only at full-time students working at least 13.4 hours per week, a significant interaction was found for evening recovery[20]. All interactions were in the hypothesized

[20] A significant interaction was also found for morning recovery, but it was not significant when the other interactions were removed.

direction, such that individuals higher in prevention focus benefitted from increased levels of detachment. For three out of the four interactions, for those low in prevention focus there was also a negative relationship between detachment from work and recovery (see Figures 8-11)[21].

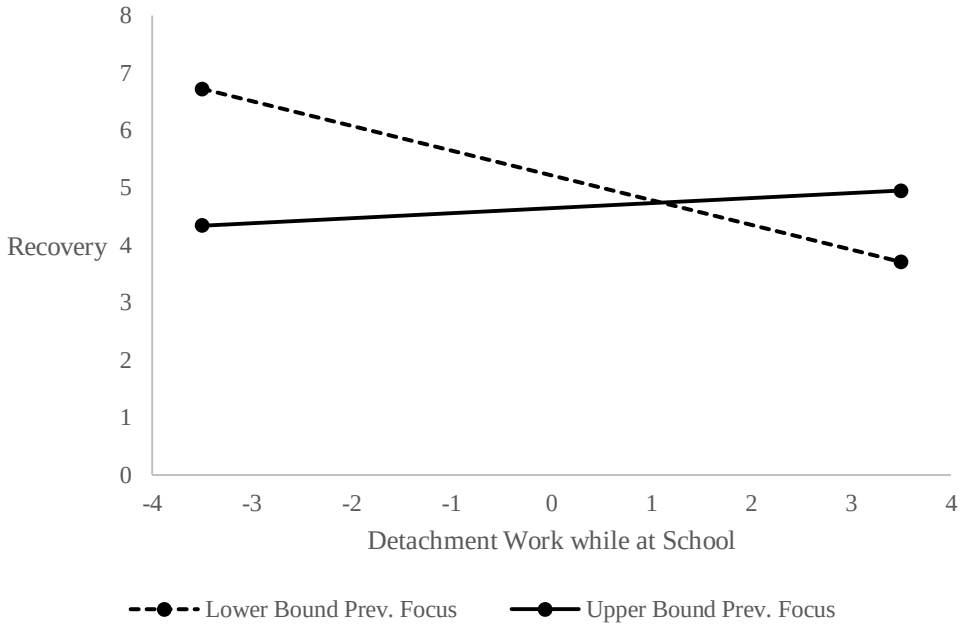


Figure 8 . Interaction between detachment from work while at school and prevention focus for morning recovery for days when the individual went to school for all individuals. Lower bound was -7.80, which was outside of the range of observed values, and upper bound was .02, which was within the range of observed values.

[21] The interaction between detachment from work while at school and prevention focus was also significant for morning mental fatigue on days when individuals went to work and school for all participants as well as only for full-time students working at least 13.4 hours per week. However, for the former, the interaction was not significant when the other interactions were removed and for the latter, neither the upper nor lower region of significance were within the observed range of data.

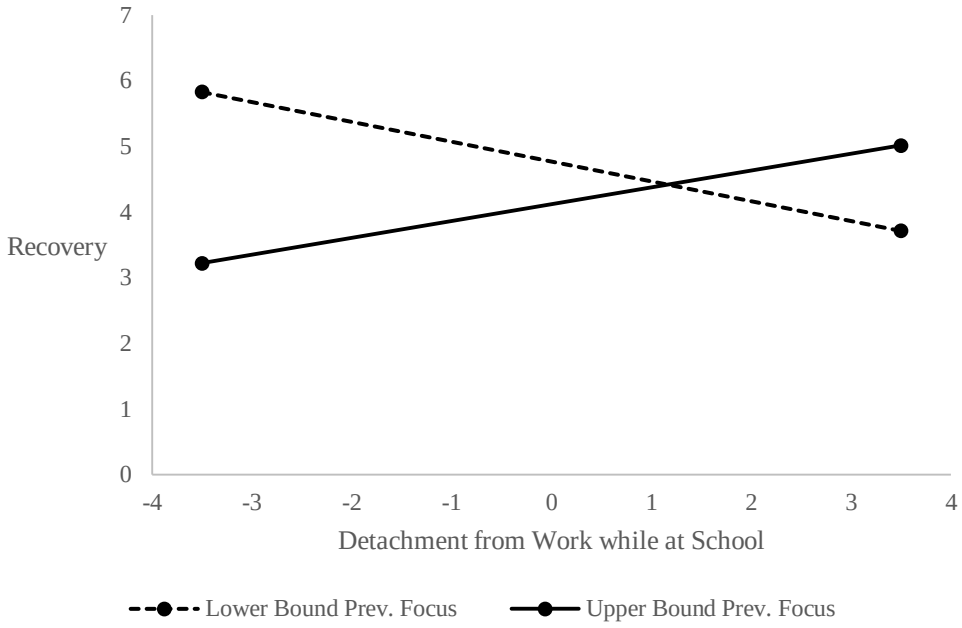


Figure 9. Interaction between detachment from work while at school and prevention focus for evening recovery for days when individuals went to school and worked for all individuals. Lower bound for prevention focus was -3.17, which was within the range of observed values and upper bound was 2.90, which was within the range of observed values.

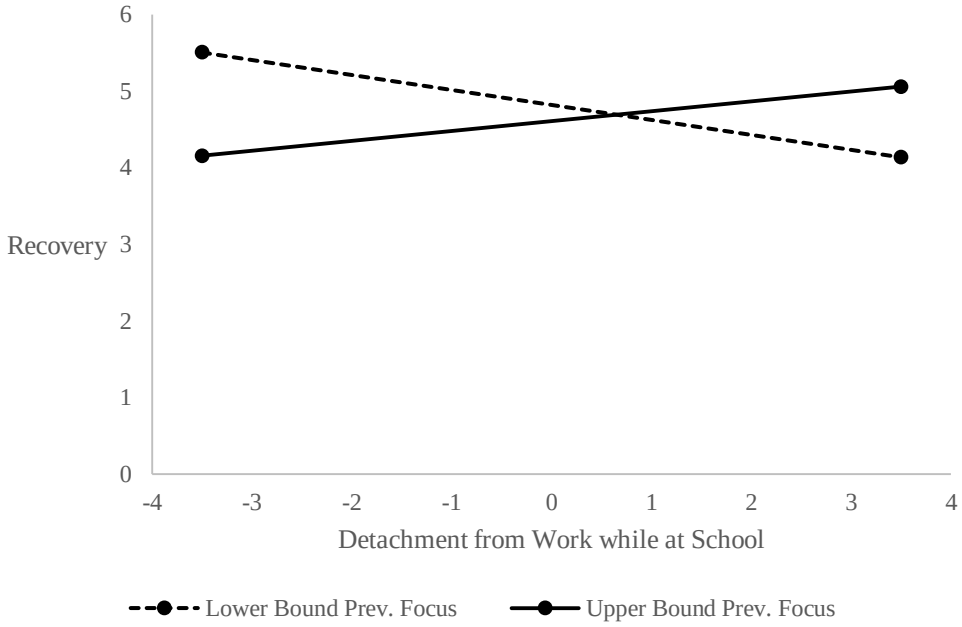


Figure 10. Interaction between detachment from work while at school and morning recovery for days when individuals went to work and school for all individuals. Lower bound was -1.84, which was within the range of observed values, and upper bound was .65, which was within the range of observed values.

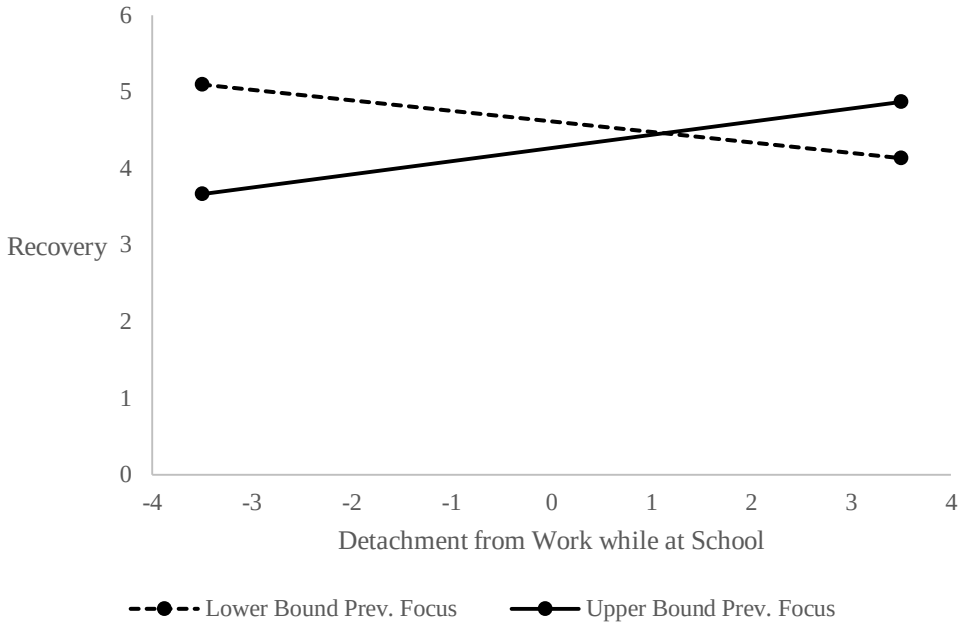


Figure 11. Interaction between detachment from work while at school and prevention focus for evening recovery for days when individuals went to school for individuals working at least 13.4 hours per week. Lower bound was -.70, which was within range of observed values, and upper bound was 2.18, which was within range of observed values.

Discussion of Interaction Effects

Of the 16 significant interaction effects, five either had no regions of significance or had uninterpretable regions of significance. Of the eleven with interpretable regions of significance, six provided support for my hypotheses that individuals high in prevention focus would benefit more than those low in prevention focus from detaching from work or school. Of the other five significant results, three showed that detachment from work or detachment from work while at school only helped those low in prevention focus and two showed that for those low in prevention focus, detachment from work or detachment from work while at school were related to worse well-being. Additionally, three of the findings supporting my hypothesis also

showed that individuals low in prevention focus demonstrate a negative relationship between detachment and well-being. In explaining these results, the questions that need to be answered are first , why detachment from work was occasionally negatively related to well-being for those low in detachment and second, why detachment from school was only beneficial for those low in detachment in some cases.

Regarding the seemingly negative effect of detachment on well-being, it is important to note that the only variables for which this was the case were those related to detachment from work (either detachment from work while at school or general detachment from work). It is important to consider this finding in light of the main effects reported previously, which showed that detachment from work had a negative relationship with well-being. The explanation that I gave for those findings was that individuals may just not care enough about their jobs for detachment to have much of an effect on well-being, with the negative relationship existing due to the fact that if an individual does fully detach from work, it might be because of other stressors that also negatively influence well-being. Given the interaction effects found, this effect seems to especially be true for individuals low in prevention focus.

The other interaction finding for which an explanation is needed is why those low in prevention focus benefitted from school detachment in some cases, while those high in prevention focus did not. As mentioned previously, one possible explanation for this is that prevention focus may actually be offsetting some of the benefits from detachment. If this is the case, then individuals lower in detachment will enjoy the benefits other research has shown from detachment while those high in prevention focus

do not, given that they might have increased stress or other negative effects following detachment.

Ultimately these conclusions are all quite speculative. Given the overall lack of significant effects and the mixed findings within the significant effects, the safest conclusion that can be reached is that prevention focus overall does not interact with well-being.

Appendix H: Normality Assumption

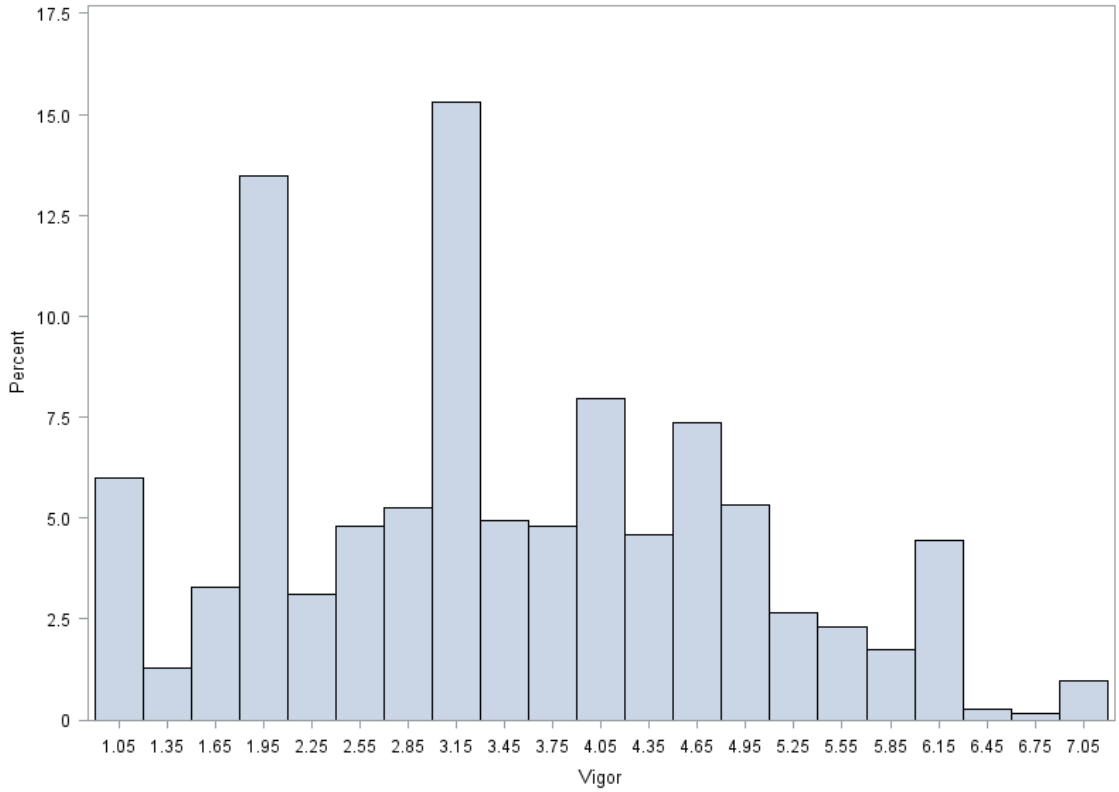


Figure 12. Histogram of values of evening vigor across all days for all participants.

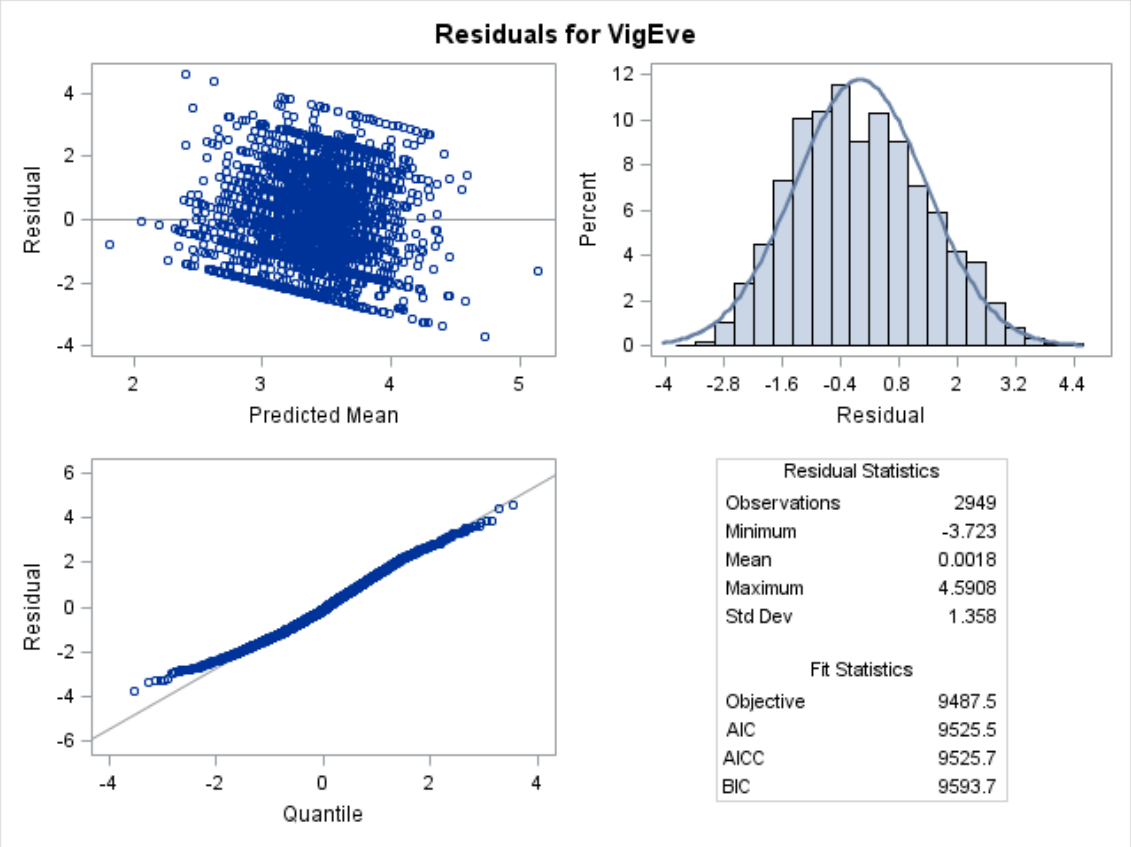


Figure 13. Histogram and other charts for residuals of evening vigor across all days for all participants when using model with recovery variables.

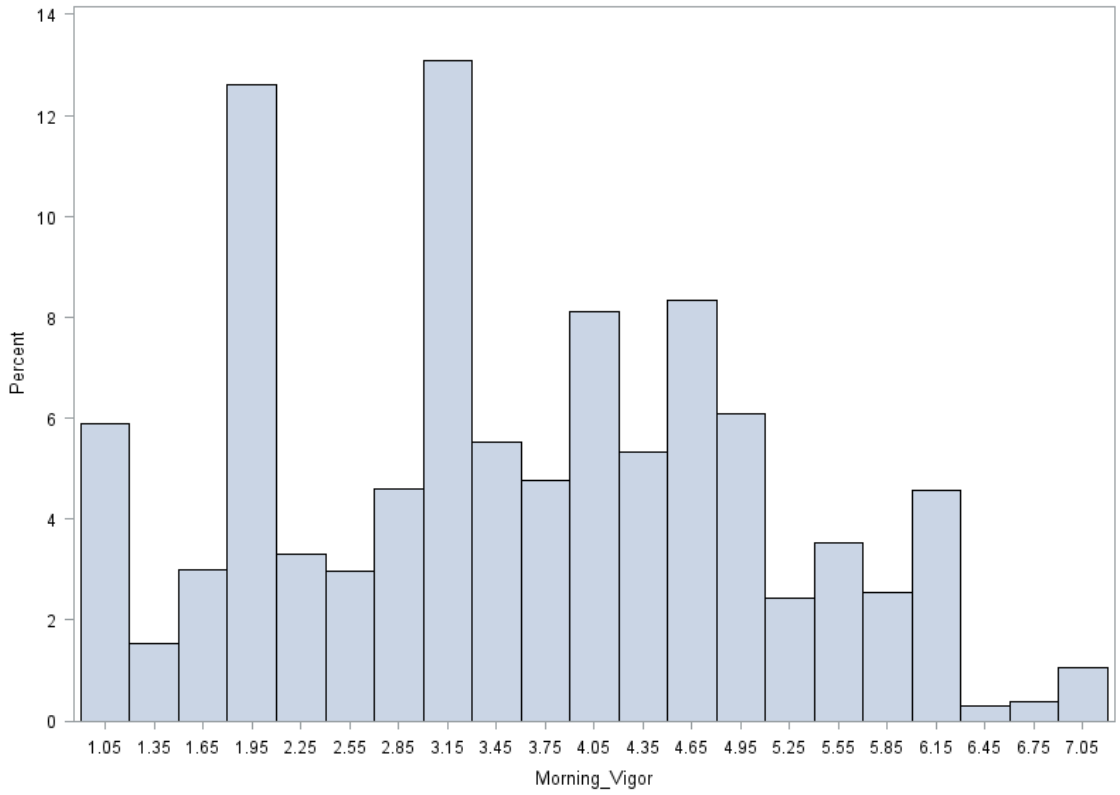


Figure 14. Histogram of values of morning vigor across all days for all participants.

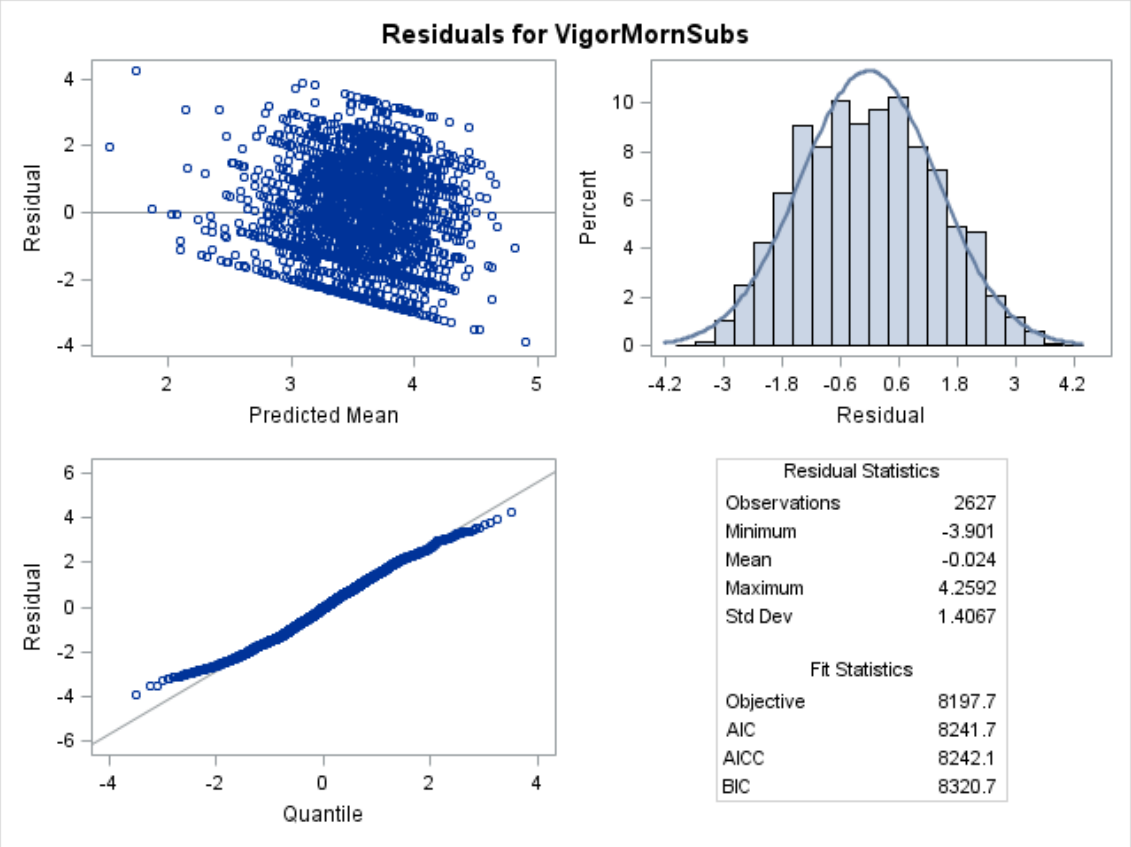


Figure 15. Histogram and other charts for residuals of morning vigor across all days for all participants when using model with recovery variables.

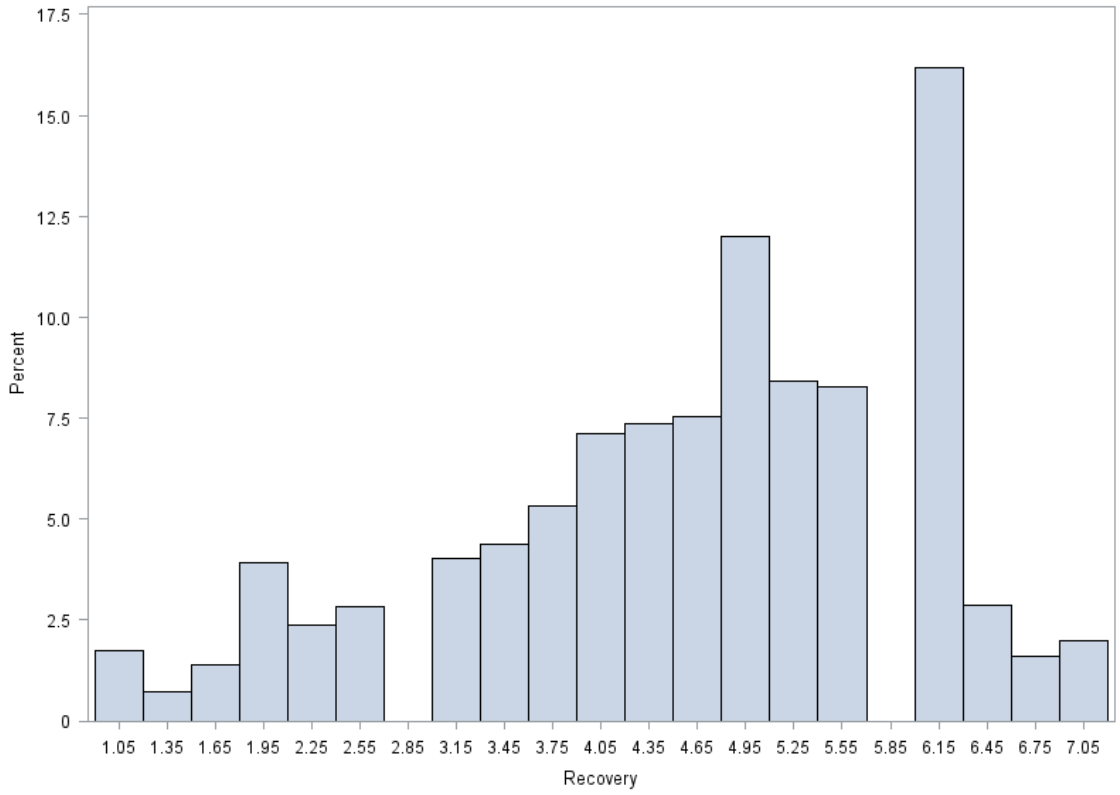


Figure 16. Histogram of values of evening recovery across all days for all participants.

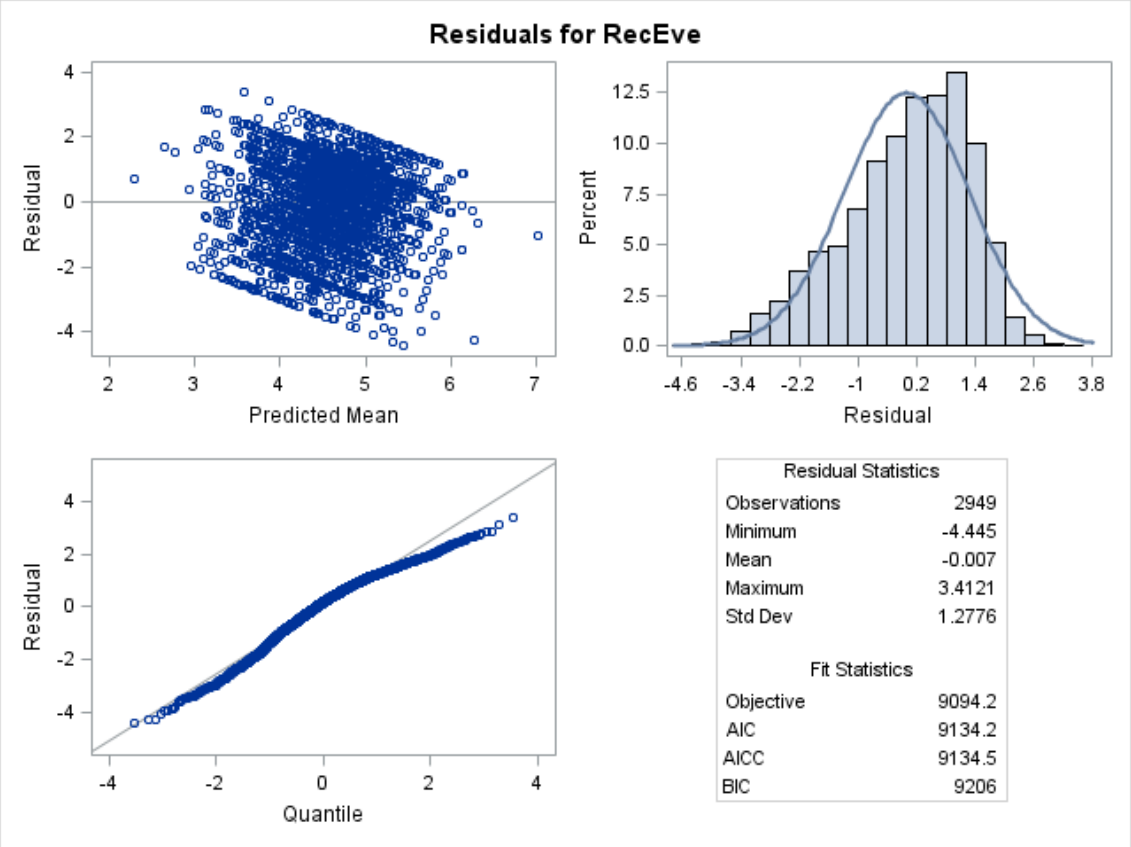


Figure 17. Histogram and other charts for residuals of evening recovery across all days for all participants when using model with recovery variables.

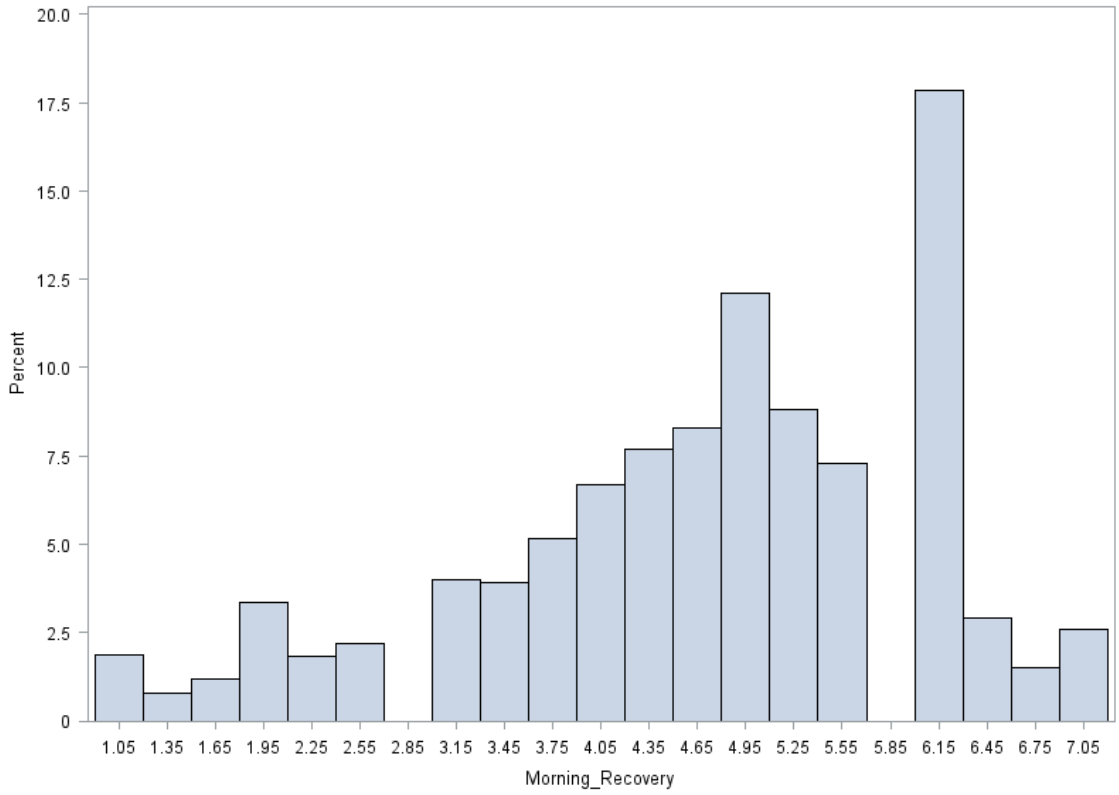


Figure 18. Histogram of values of morning recovery across all days for all participants.

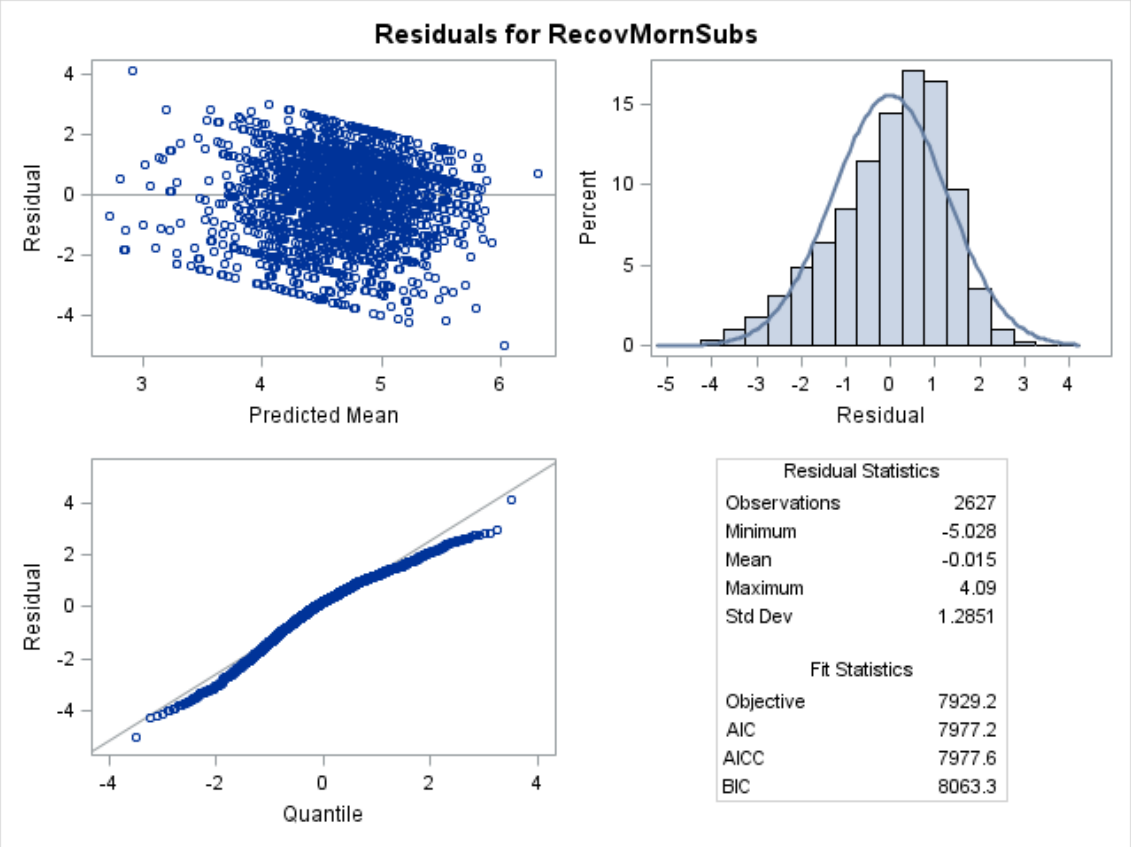


Figure 19. Histogram and other charts for residuals of morning recovery across all days for all participants when using model with recovery variables.

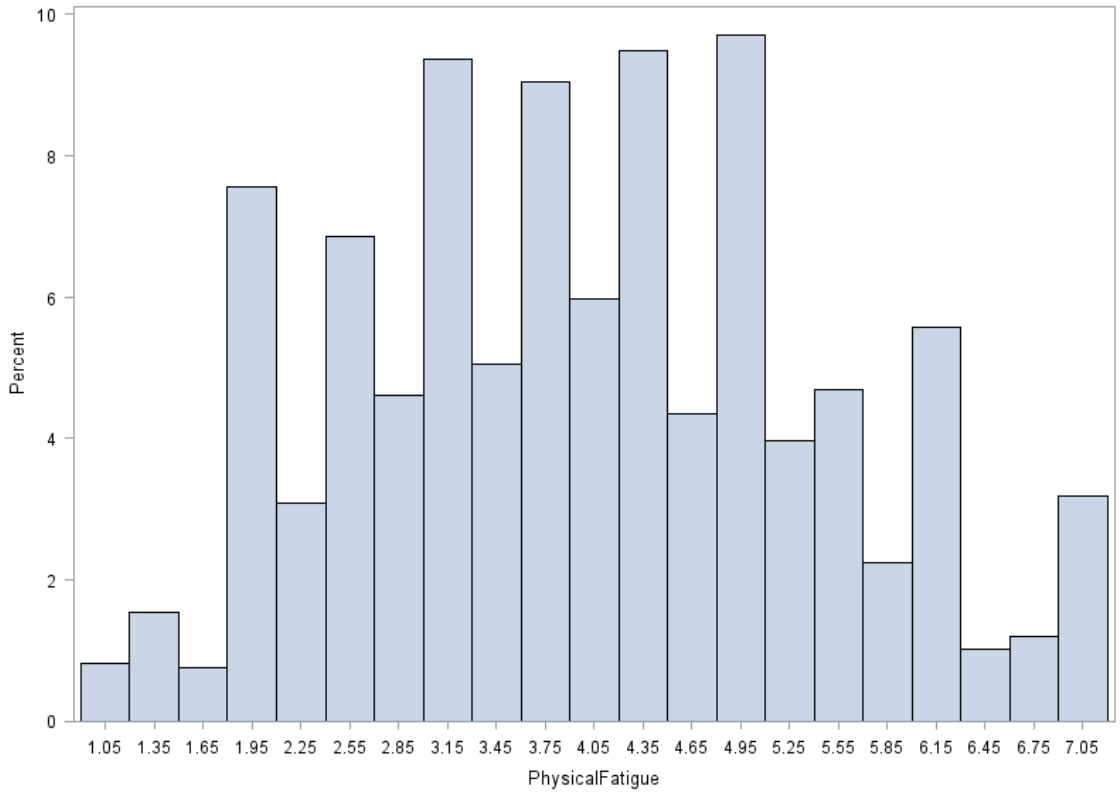


Figure 20. Histogram of values of evening physical fatigue across all days for all participants.

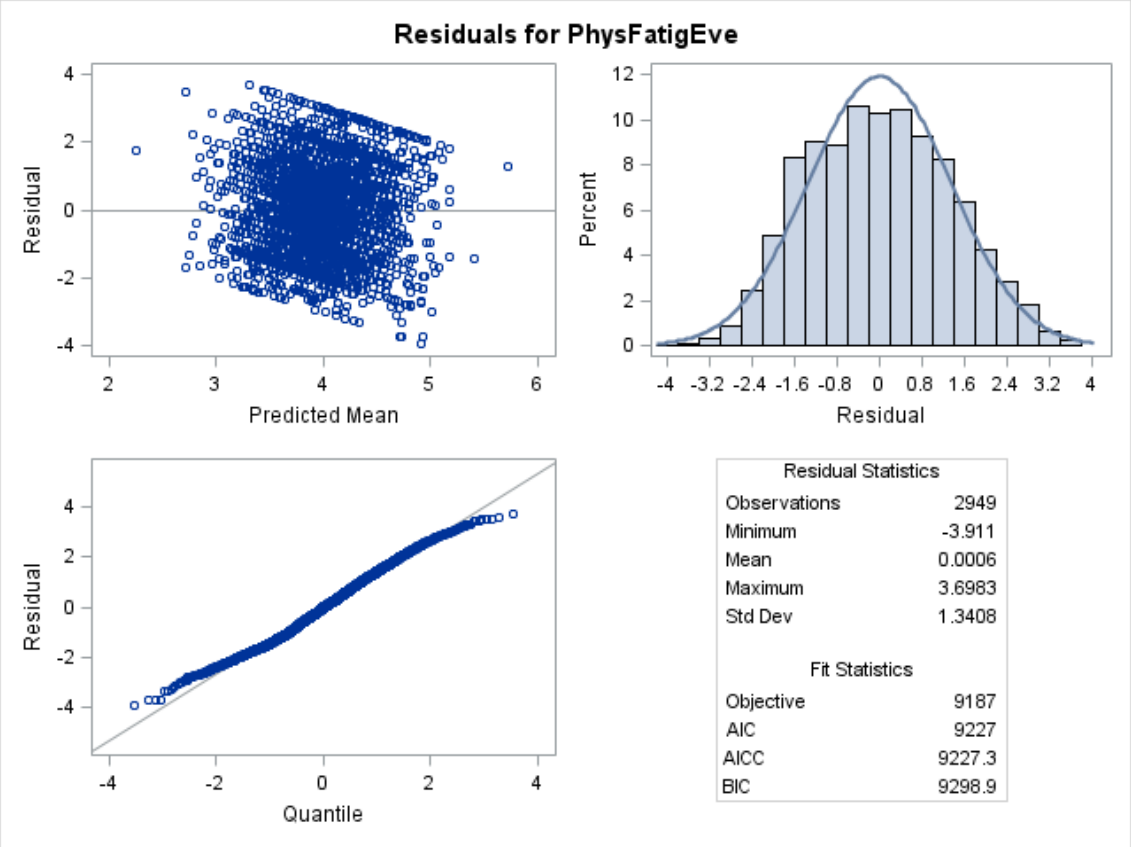


Figure 21. Histogram and other charts for residuals of evening physical fatigue across all days for all participants when using model with recovery variables.

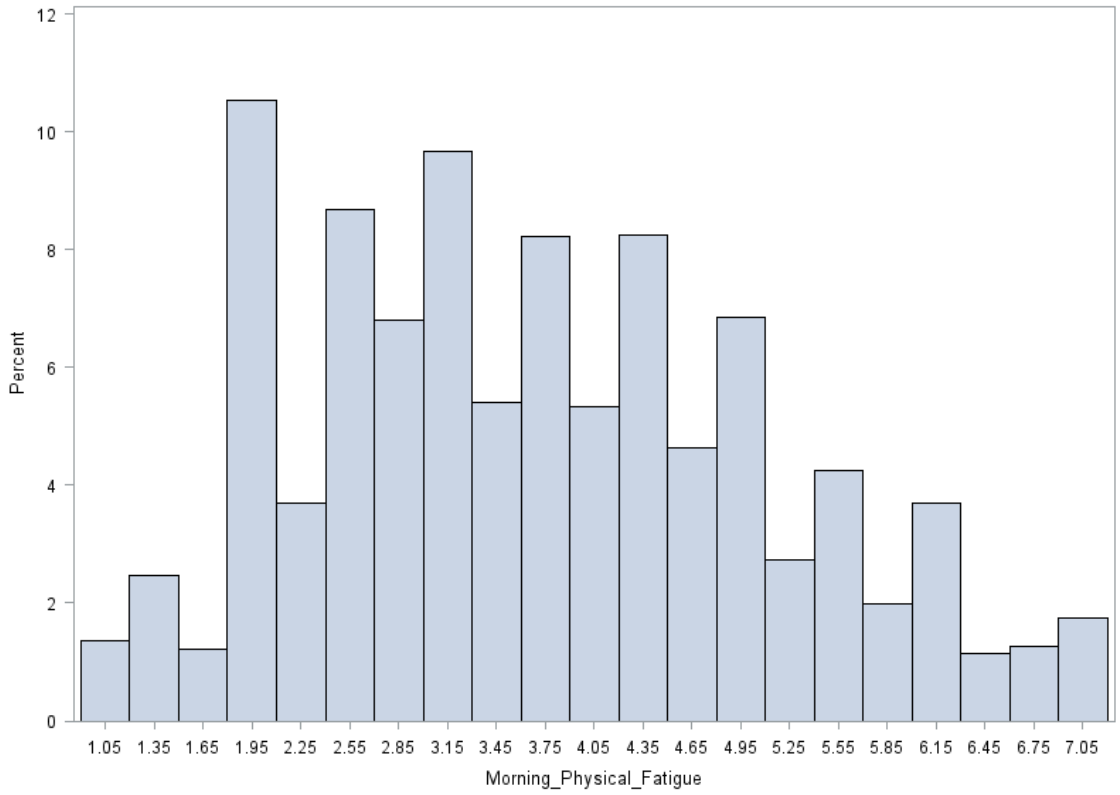


Figure 22. Histogram of values of morning physical fatigue across all days for all participants.

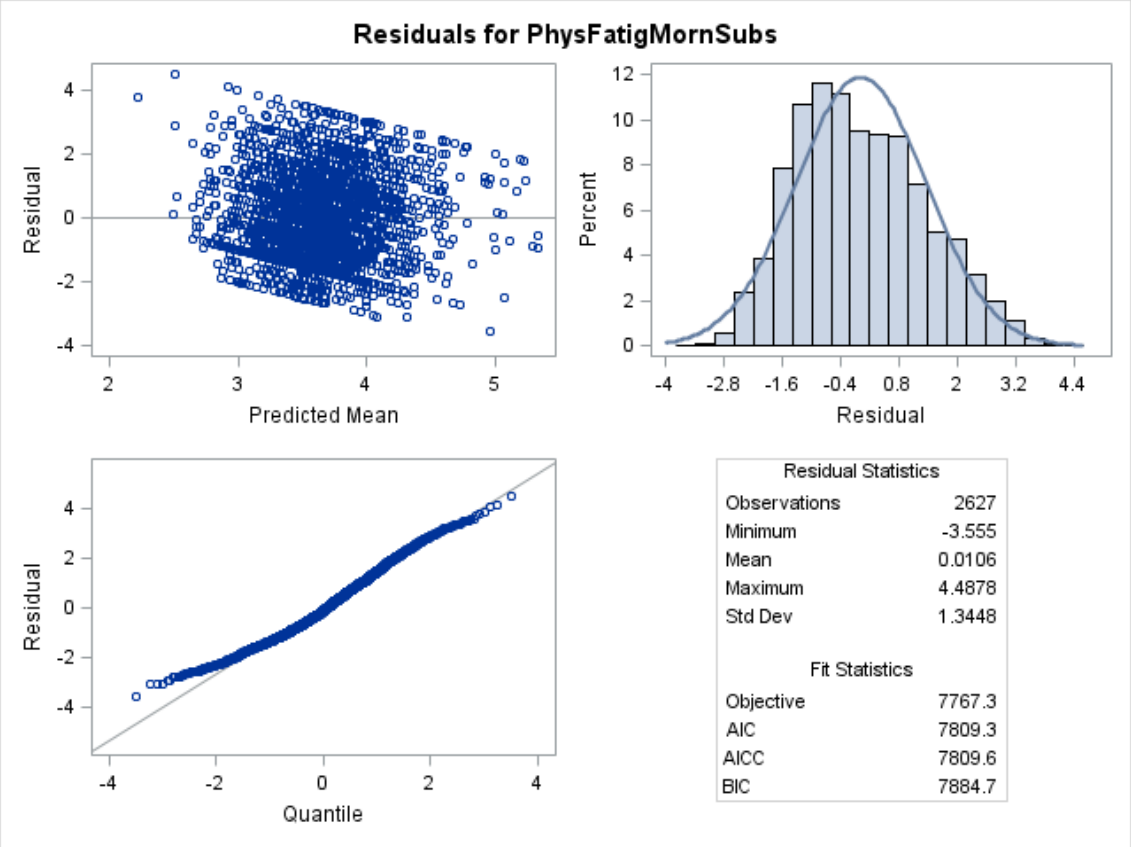


Figure 23. Histogram and other charts for residuals of morning physical fatigue across all days for all participants when using model with recovery variables.

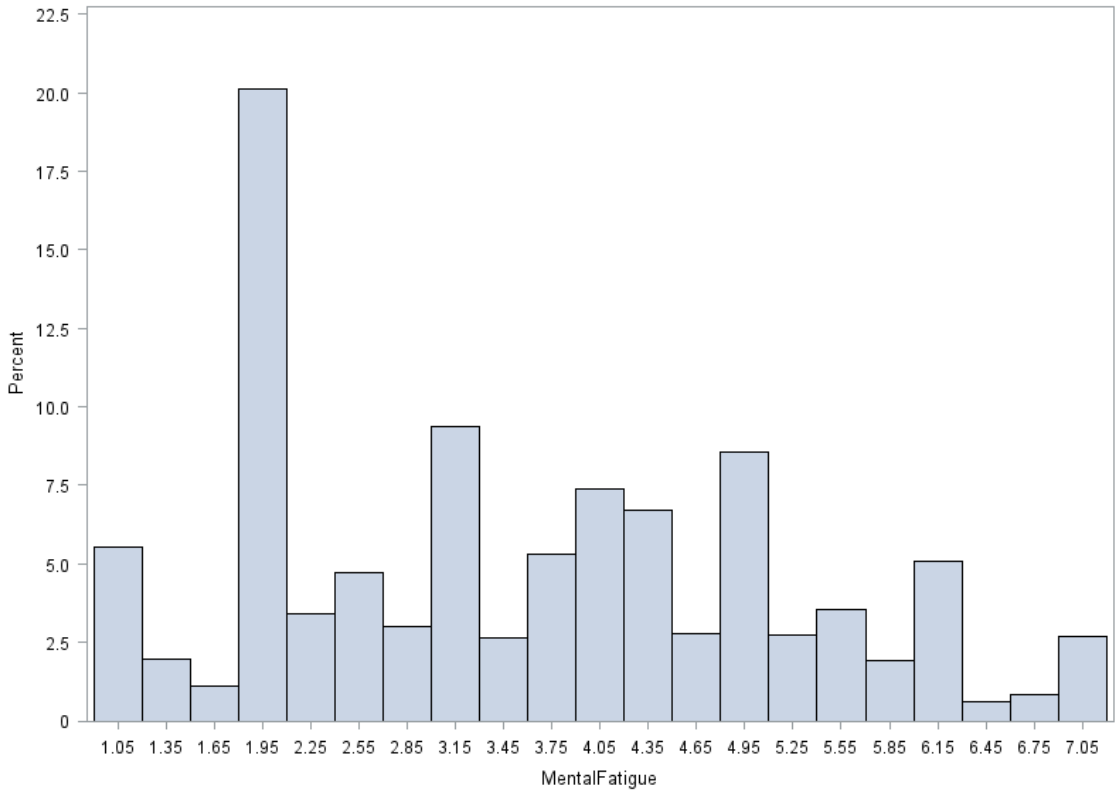


Figure 24. Histogram of values of evening mental fatigue across all days for all participants.

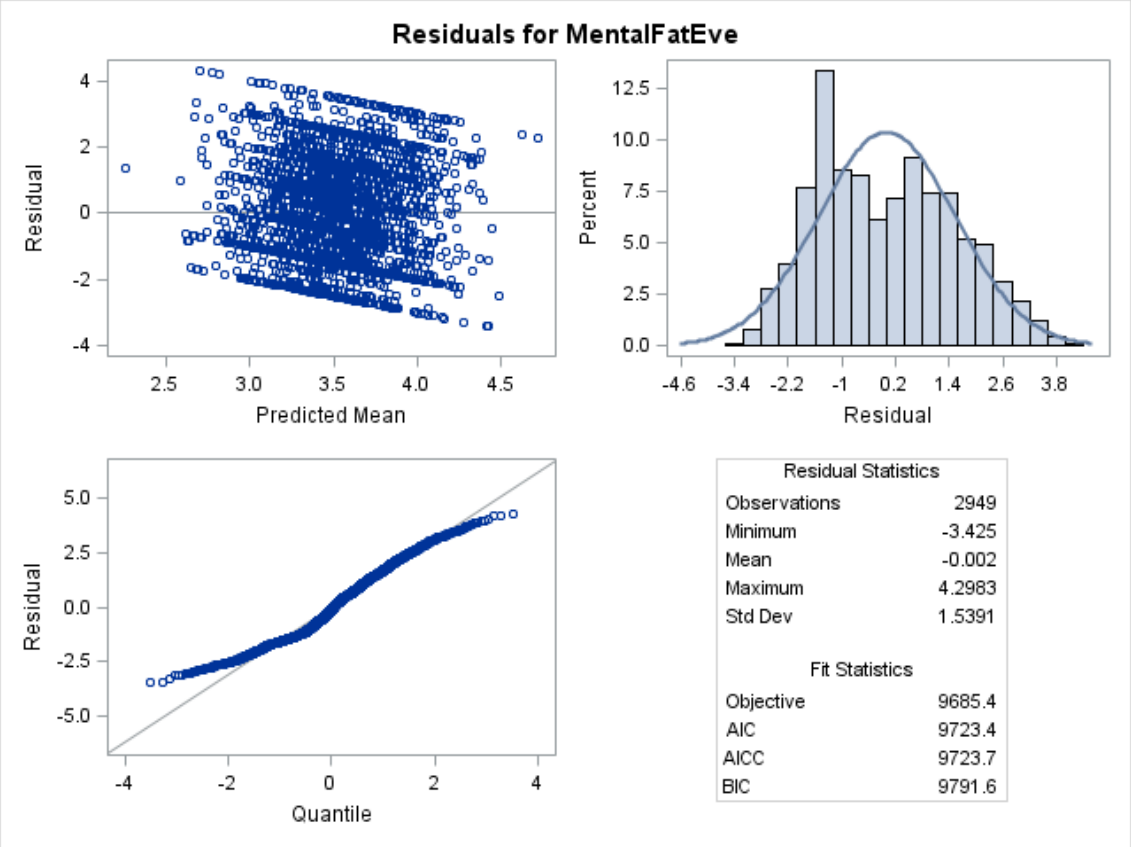


Figure 25. Histogram and other charts for residuals of evening mental fatigue across all days for all participants when using model with recovery variables.

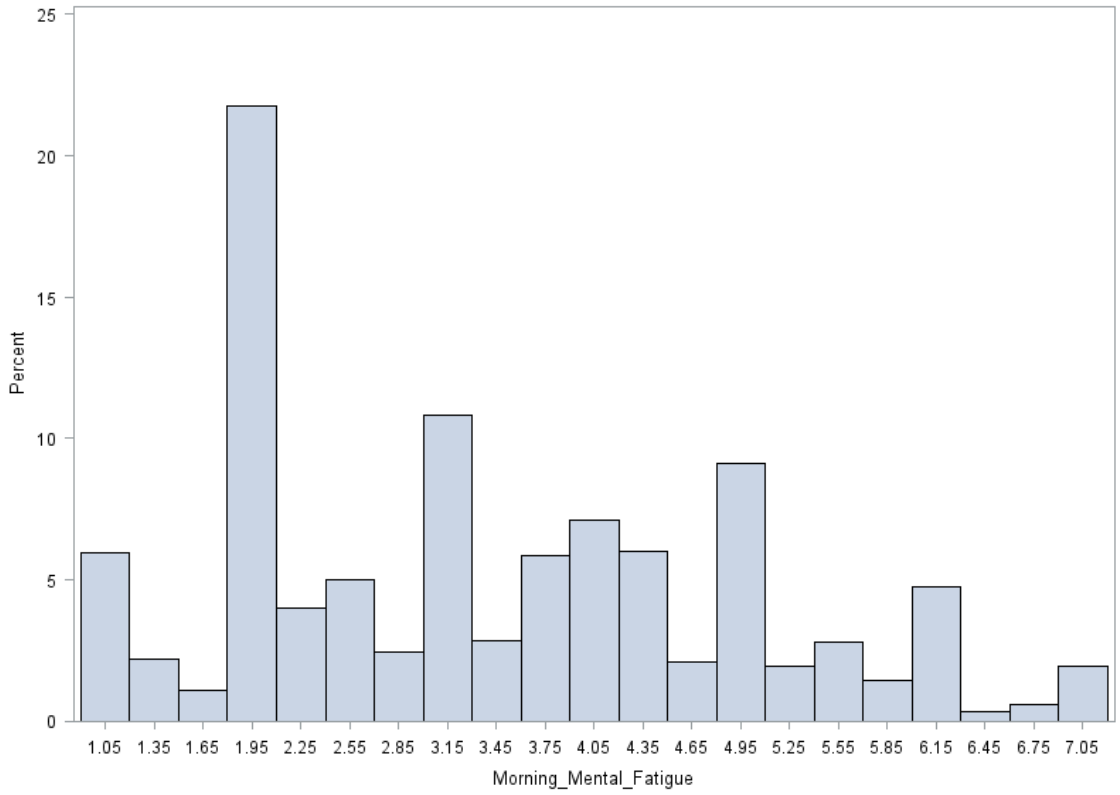


Figure 26. Histogram of values of morning mental fatigue across all days for all participants.

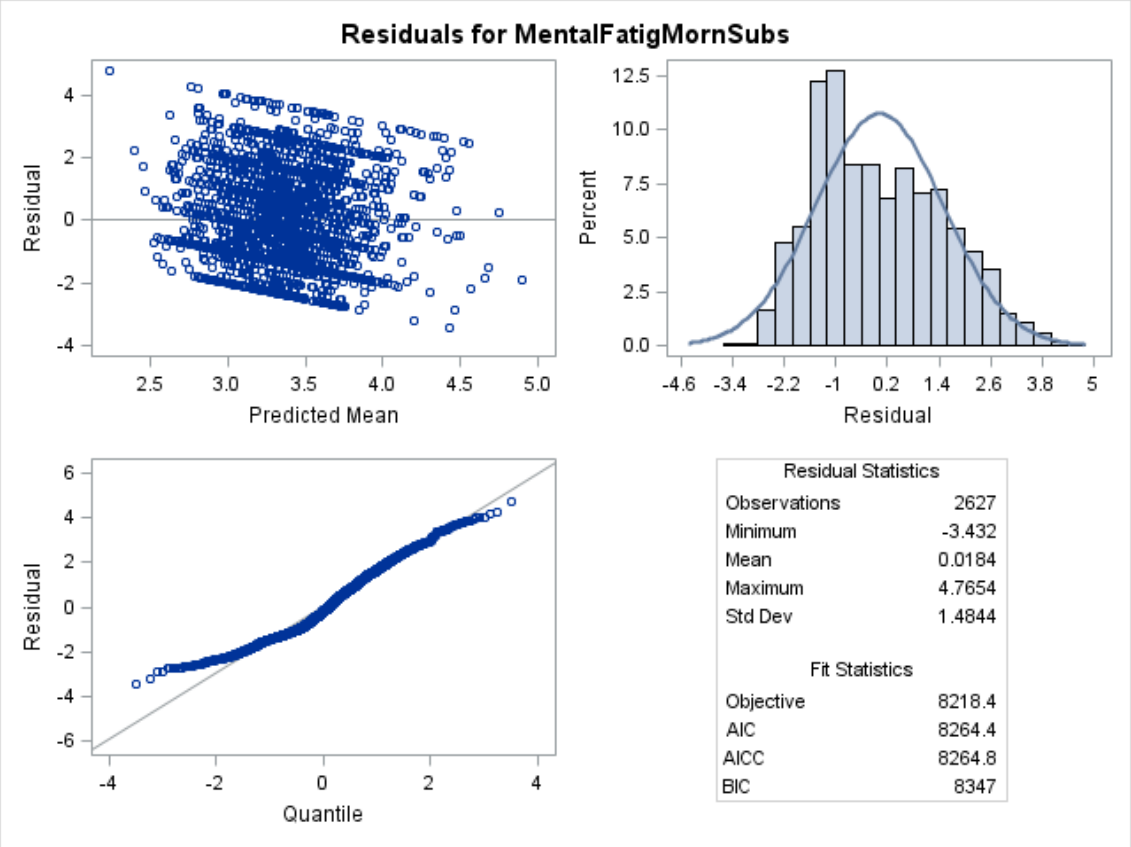
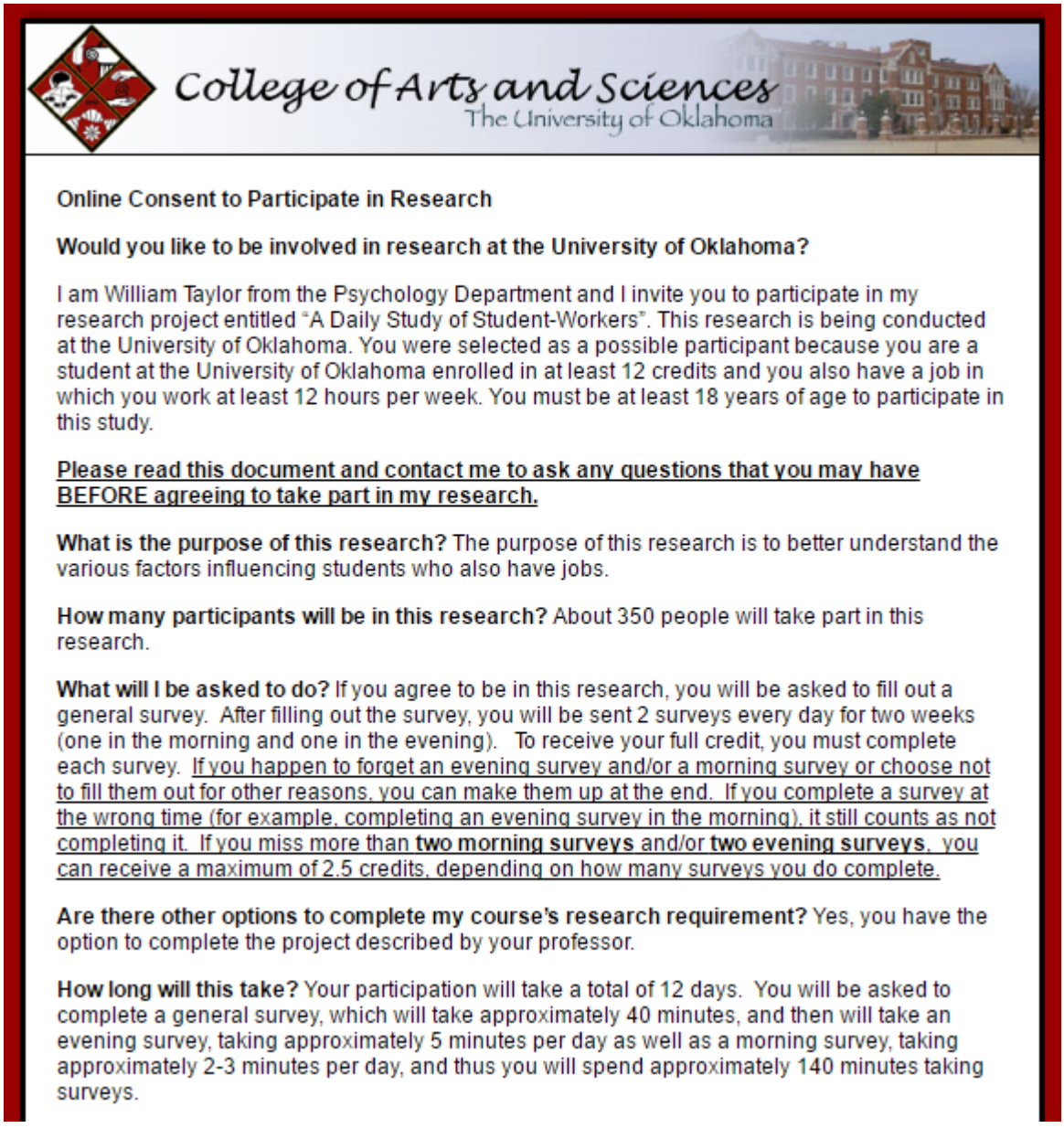


Figure 27. Histogram and other charts for residuals of morning mental fatigue across all days for all participants when using model with recovery variables.

Appendix I: Screenshots of Survey

(Note: Not all pages are shown. Only those pages asking questions that I used. Also, what appears below reflects the final survey version. Small additions were made at certain points in the study, such as including the clarification question bubbles and adjusting the manner in which individuals were asked what time they wanted the survey taken and slight changes in the instructions for the time to take the survey. However, none of the actual questions used in analyses were changed)

General Survey



College of Arts and Sciences
The University of Oklahoma

Online Consent to Participate in Research

Would you like to be involved in research at the University of Oklahoma?

I am William Taylor from the Psychology Department and I invite you to participate in my research project entitled "A Daily Study of Student-Workers". This research is being conducted at the University of Oklahoma. You were selected as a possible participant because you are a student at the University of Oklahoma enrolled in at least 12 credits and you also have a job in which you work at least 12 hours per week. You must be at least 18 years of age to participate in this study.

Please read this document and contact me to ask any questions that you may have BEFORE agreeing to take part in my research.

What is the purpose of this research? The purpose of this research is to better understand the various factors influencing students who also have jobs.

How many participants will be in this research? About 350 people will take part in this research.

What will I be asked to do? If you agree to be in this research, you will be asked to fill out a general survey. After filling out the survey, you will be sent 2 surveys every day for two weeks (one in the morning and one in the evening). To receive your full credit, you must complete each survey. If you happen to forget an evening survey and/or a morning survey or choose not to fill them out for other reasons, you can make them up at the end. If you complete a survey at the wrong time (for example, completing an evening survey in the morning), it still counts as not completing it. If you miss more than **two morning surveys** and/or **two evening surveys**, you can receive a maximum of 2.5 credits, depending on how many surveys you do complete.

Are there other options to complete my course's research requirement? Yes, you have the option to complete the project described by your professor.

How long will this take? Your participation will take a total of 12 days. You will be asked to complete a general survey, which will take approximately 40 minutes, and then will take an evening survey, taking approximately 5 minutes per day as well as a morning survey, taking approximately 2-3 minutes per day, and thus you will spend approximately 140 minutes taking surveys.

What are the risks and/or benefits if I participate? There are no risks and no benefits from being in this research.

Will I be compensated for participating? You will be reimbursed for your time and participation in this research. You will receive 3 research credits for your participation, but only if you complete all 12 days of data collection (if you forget 2 evening and/or 2 morning surveys, you can make them up at the end and still get full credit. If you complete a survey at the wrong time (for example, completing an evening survey in the morning), *it still counts as not completing the survey*. If you miss more than 2 morning or 2 evening surveys, you can receive a maximum of 2.5 credits, depending on how many surveys you complete. Additionally, if you respond dishonestly or carelessly you will not receive credit.

Who will see my information? In research reports, there will be no information that will make it possible to identify you. Research records will be stored securely and only approved researchers and the OU Institution Review Board will have access to the records.

In addition, this is an academic not-for-profit research project. Data are collected via Qualtrics, an online survey system that has its own privacy and security policies for keeping your information confidential. Please note no assurance can be made as to the use of the data you provide for purposes other than this research.

Do I have to participate? No. If you do not participate, you will not be penalized or lose benefits or services unrelated to the research. If you decide to participate, you don't have to answer any question and can stop participating at any time.

Who do I contact with questions, concerns or complaints? If you have questions, concerns or complaints about the research or have experienced a research-related injury, contact me at 405-701-9640 or wtaylor@ou.edu. You can also contact Lori Snyder, PhD at 405-325-4582 or lsnyder@ou.edu.

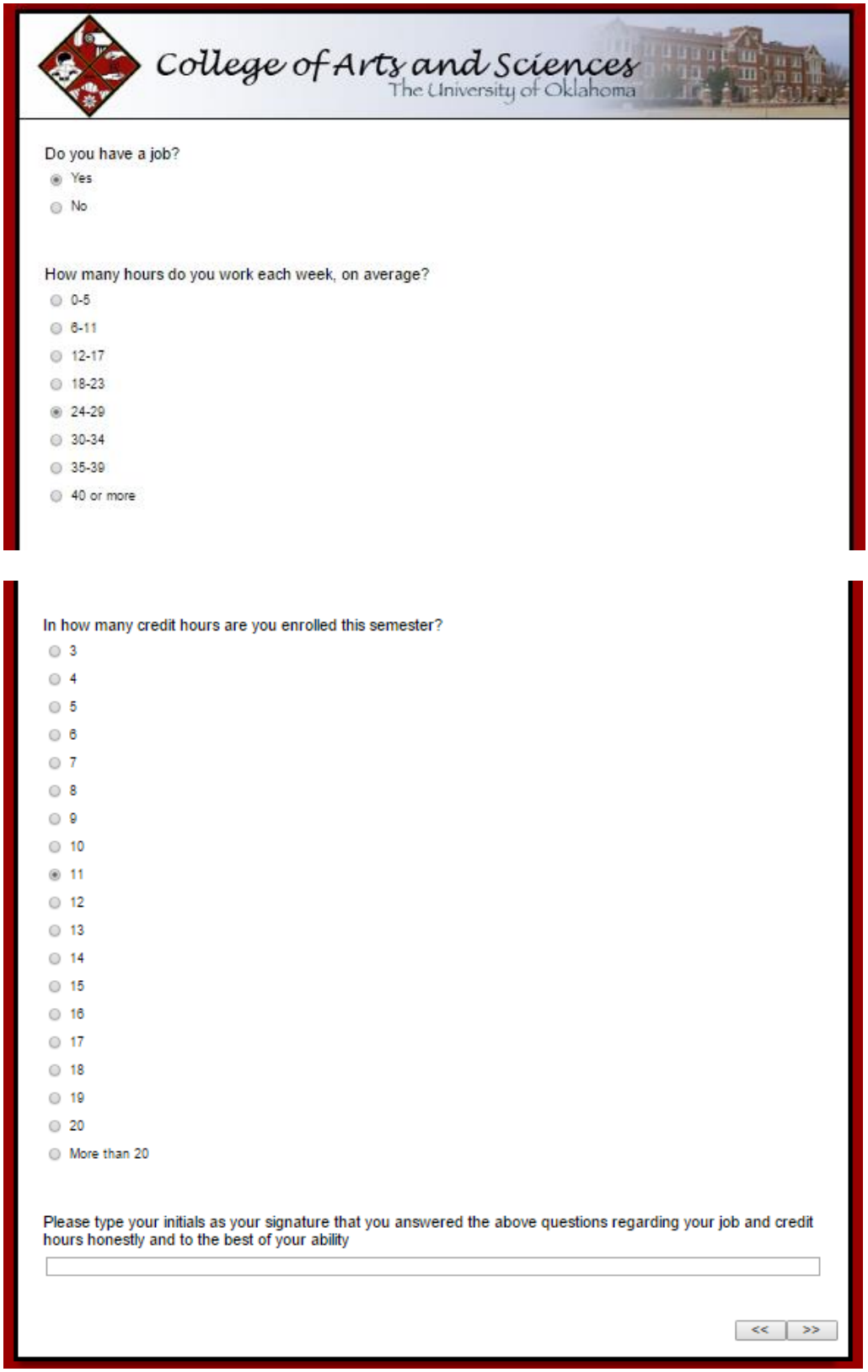
You can also contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405-325-8110 or irb@ou.edu if you have questions about your rights as a research participant, concerns, or complaints about the research and wish to talk to someone other than the researcher(s) or if you cannot reach the researcher(s).

Please print this document for your records. By providing information to the researcher(s), I am agreeing to participate in this research.

This research has been approved by the University of Oklahoma, Norman Campus IRB.

IRB Number: 5944 **Approval date:** 9/25/15

- ○ I agree to participate
- ○ I do not want to participate


College of Arts and Sciences
The University of Oklahoma
Do you have a job?
Yes
No
How many hours do you work each week, on average?
0-5
6-11
12-17
18-23
24-29
30-34
35-39
40 or more
In how many credit hours are you enrolled this semester?
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
More than 20
Please type your initials as your signature that you answered the above questions regarding your job and credit hours honestly and to the best of your ability
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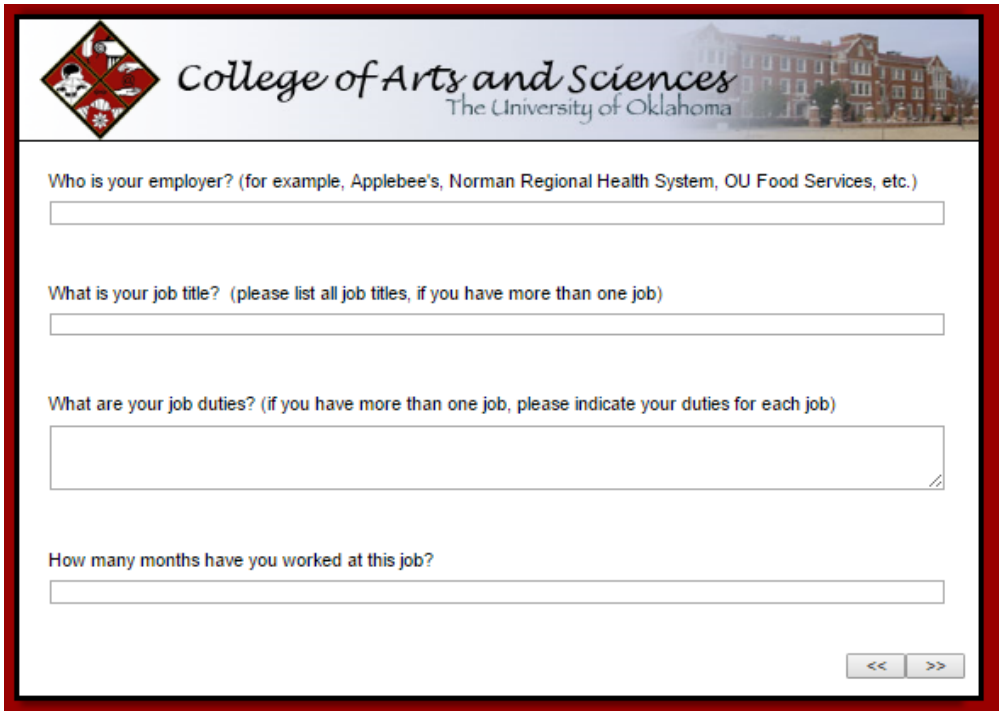
College of Arts and Sciences
The University of Oklahoma
Who is your employer? (for example, Applebee's, Norman Regional Health System, OU Food Services, etc.)
What is your job title? (please list all job titles, if you have more than one job)
What are your job duties? (if you have more than one job, please indicate your duties for each job)
How many months have you worked at this job?
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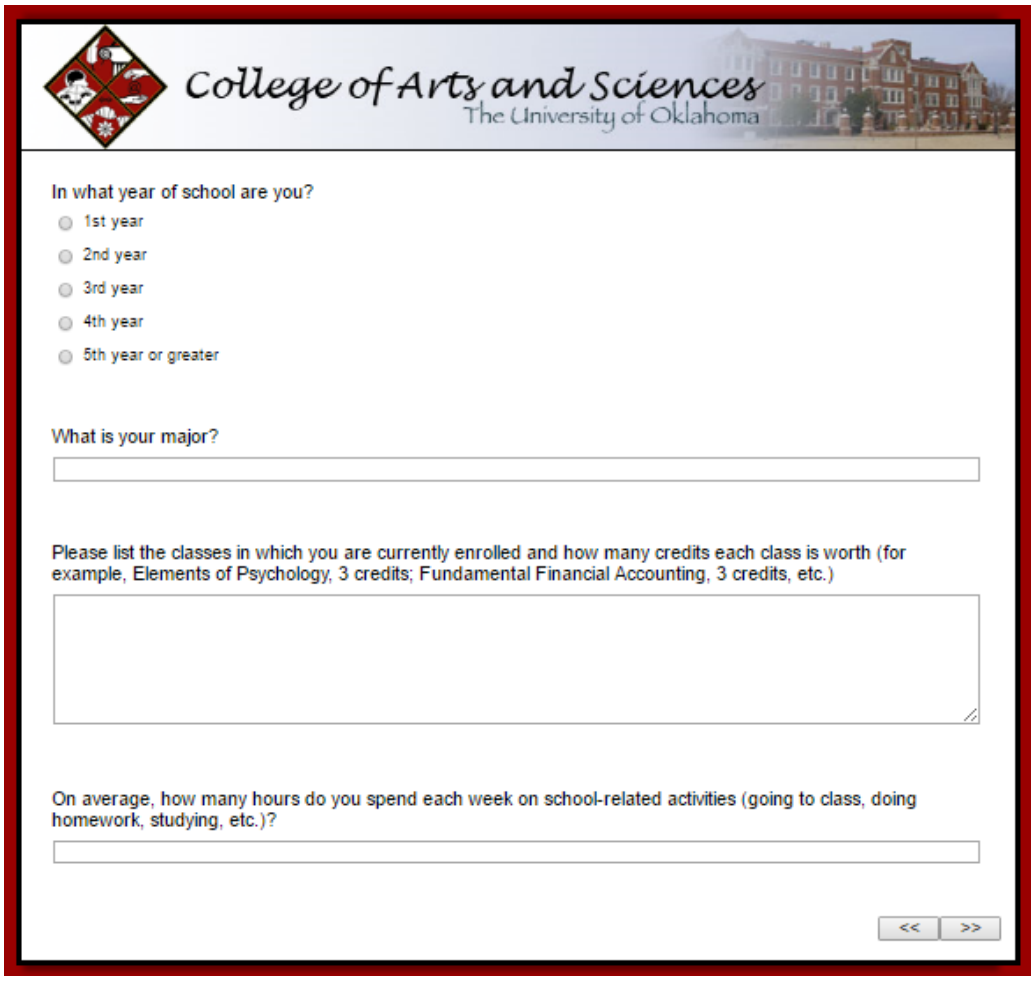
College of Arts and Sciences
The University of Oklahoma
In what year of school are you?
1st year
2nd year
3rd year
4th year
5th year or greater
What is your major?
Please list the classes in which you are currently enrolled and how many credits each class is worth (for example, Elements of Psychology, 3 credits; Fundamental Financial Accounting, 3 credits, etc.)
On average, how many hours do you spend each week on school-related activities (going to class, doing homework, studying, etc.)?
<<
>>

Please indicate the extent to which you agree or disagree with the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
The most important things that happen to me involve my coursework and classes this semester.						
To me, my coursework and classes this semester are only a small part of who I am.						
I am very much involved personally in my coursework and classes this semester.						
I live, eat and breathe my coursework and classes this semester.						

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Most of my interests are centered around my coursework and classes this semester.						
Usually I feel detached from my coursework and classes this semester.						
I consider my coursework and classes this semester to be very central to my existence.						
I like to be absorbed in my coursework and classes this semester most of the time.						

Please indicate the extent to which you agree or disagree with the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
The most important things that happen to me involve my present job.						
To me, my job is only a small part of who I am.						
I am very much involved personally in my job.						
I live, eat and breathe my job.						
Most of my interests are centered around my job.						

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I have very strong ties with my present job which would be very difficult to break.						
Usually I feel detached from my job.						
Most of my personal life goals are job-oriented.						
I consider my job to be very central to my existence.						
I like to be absorbed in my job most of the time.						

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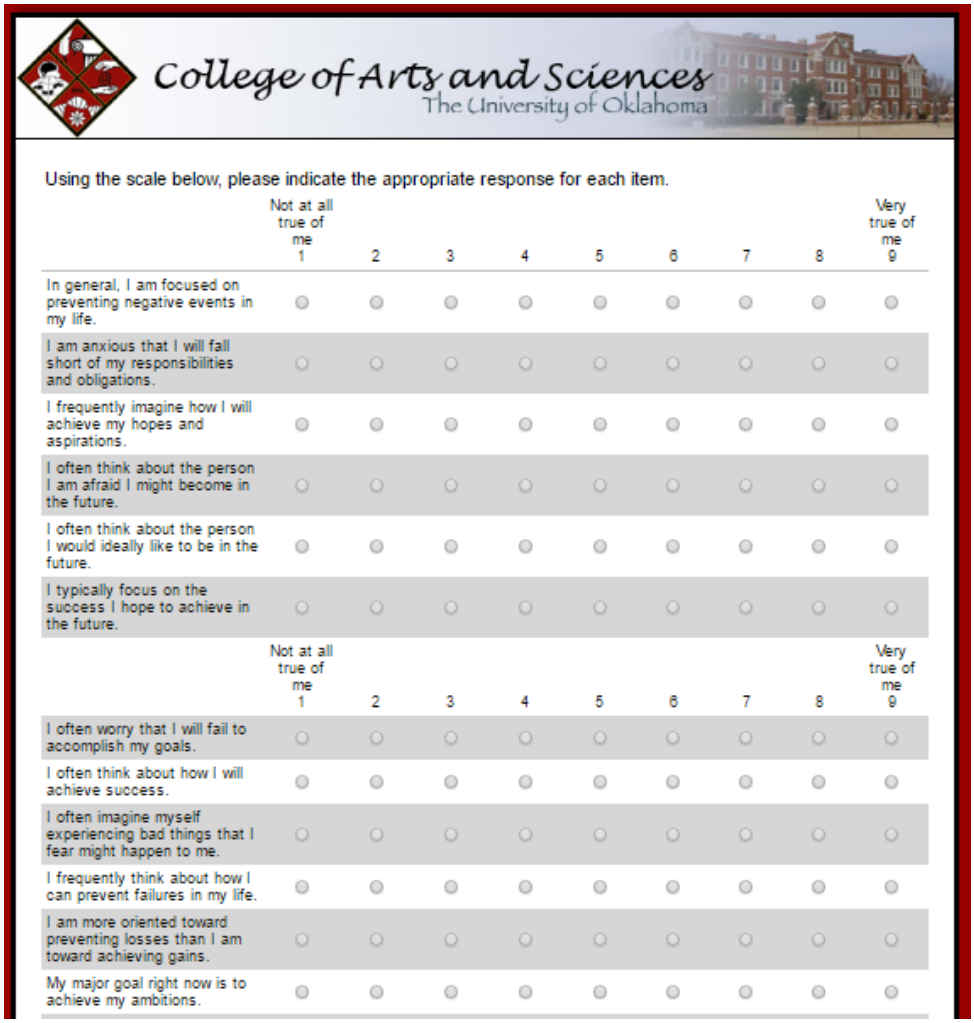

Using the scale below, please indicate the appropriate response for each item.

	Not at all true of me 1	2	3	4	5	6	7	8	Very true of me 9
In general, I am focused on preventing negative events in my life.									
I am anxious that I will fall short of my responsibilities and obligations.									
I frequently imagine how I will achieve my hopes and aspirations.									
I often think about the person I am afraid I might become in the future.									
I often think about the person I would ideally like to be in the future.									
I typically focus on the success I hope to achieve in the future.									

	Not at all true of me 1	2	3	4	5	6	7	8	Very true of me 9
I often worry that I will fail to accomplish my goals.									
I often think about how I will achieve success.									
I often imagine myself experiencing bad things that I fear might happen to me.									
I frequently think about how I can prevent failures in my life.									
I am more oriented toward preventing losses than I am toward achieving gains.									
My major goal right now is to achieve my ambitions.									

	Not at all true of me 1	2	3	4	5	6	7	8	Very true of me 9
My major goal right now is to avoid becoming a failure.									
I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.									
I see myself as someone who is primarily striving to become the self I "ought" to be—to fulfill my duties, responsibilities, and obligations.									
In general, I am focused on achieving positive outcomes in my life.									
I often imagine myself experiencing good things that I hope will happen to me.									
Overall, I am more oriented toward achieving success than preventing failure.									

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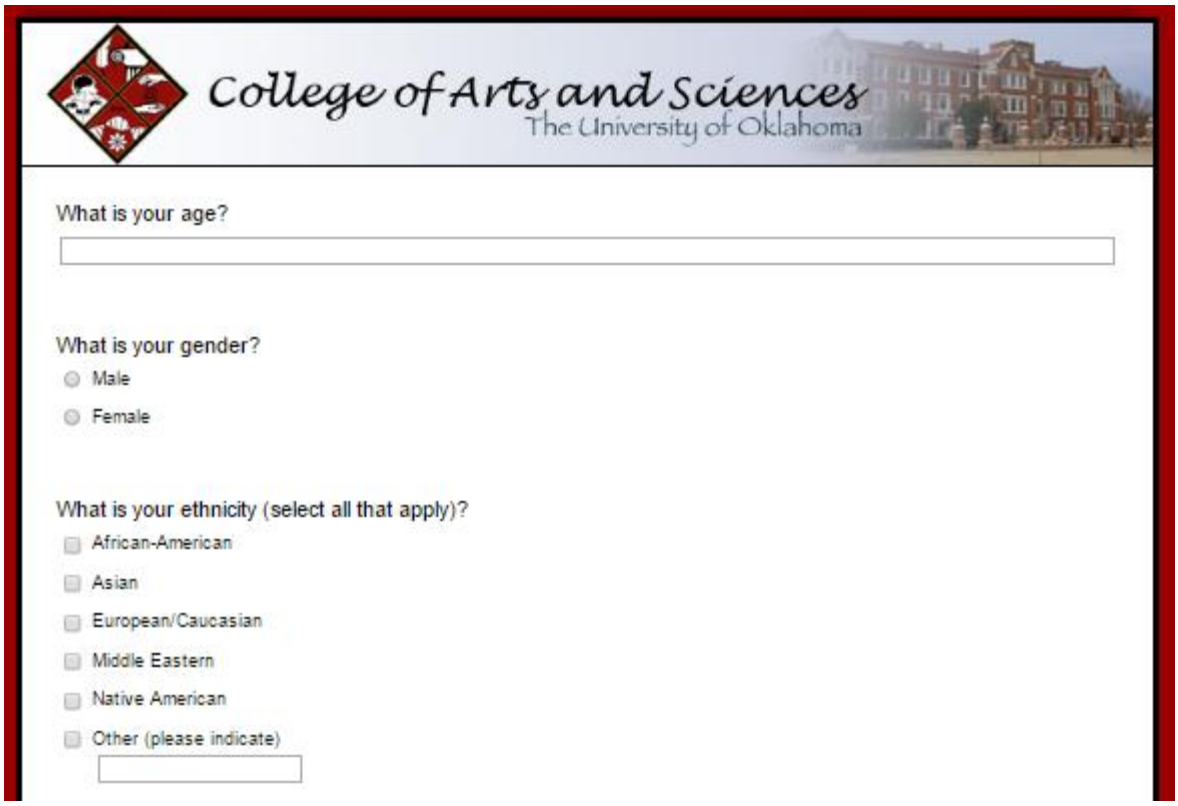
College of Arts and Sciences
The University of Oklahoma
What is your age?
What is your gender?
Male
Female
What is your ethnicity (select all that apply)?
African-American
Asian
European/Caucasian
Middle Eastern
Native American
Other (please indicate)

College of Arts and Sciences
The University of Oklahoma

You now will have the opportunity to complete daily surveys for 12 days. You will need to complete a survey every evening before going to bed, and the other survey you will need to take each morning. As you read in the informed consent, **to get full credit you need to take the survey for all 12 days.** Each evening survey should take approximately 5 minutes, and each morning survey will take approximately 2-3 minutes. You can complete the surveys on any device you choose (phone, tablet, laptop, etc.).

You will be emailed and/or texted the evening survey every day at approximately 11:00 PM. Please complete it **close to the time that you will be going to bed that day**. If you would like the survey to be sent at a different time (for example, if you go to bed earlier than 11:00), in the box below you can indicate the time that you would like the survey to be sent.

You will be emailed/texted the morning survey every day at 6:00 AM and will need to complete it **before you go to work** and **before you do any school-related activities** (homework, going to class, studying, etc.). Also, be sure to complete it **within two hours of when you get up** (that is, if you get up at 8:00 AM, please complete it before 10:00 AM). If you would like the survey to be sent at a time other than 6:00 AM, please indicate this in the appropriate box below.

You will be sent the first survey on the morning of Monday, February 29.

☑ What if I decide to go to bed early on one night and haven't received the survey yet? (click box for details)

Due to the fact that there may be days where you need to go to bed before you've received the survey, I will email all participants the links to every daily survey before data collection begins. If on any given day you go to bed or go to work before receiving the text/email with the link, you can simply use that original email to access the link for that particular day.

What if I will be staying up all night, or if I only sleep during the day? (click box for details)

If you typically sleep at night and on one night decide not to go to bed, please complete the survey near the time you normally go to bed.

If you frequently do not sleep at night (for example, because you have to work at night and sleep during the day), please send an email to wtaylor@ou.edu indicating your typical work/school/sleep schedule so arrangements can be made for you to take the daily survey at the best time.

What if I forget to take the survey one day? Do I lose all 3 credits? (click box for details)

We hope that you will do your best to set reminders to take the survey each day However, we are all human and mistakes can happen, or you may decide not to take the survey one day (for example, for religious reasons). If you happen to forget an evening survey and/or a morning survey or choose not to fill them out for other reasons, you can make them up at the end (on the Saturday and Sunday following the 12th day of data collection). If you miss more than two morning surveys and/or two evening surveys, you can receive a maximum of 2.5 credits, depending on how many surveys you do complete.

Do you need the evening survey sent at a time other than 11:00 PM?

- Yes
- No

Do you need the morning survey to be sent at a time other than 6:00 AM?

- Yes
- No

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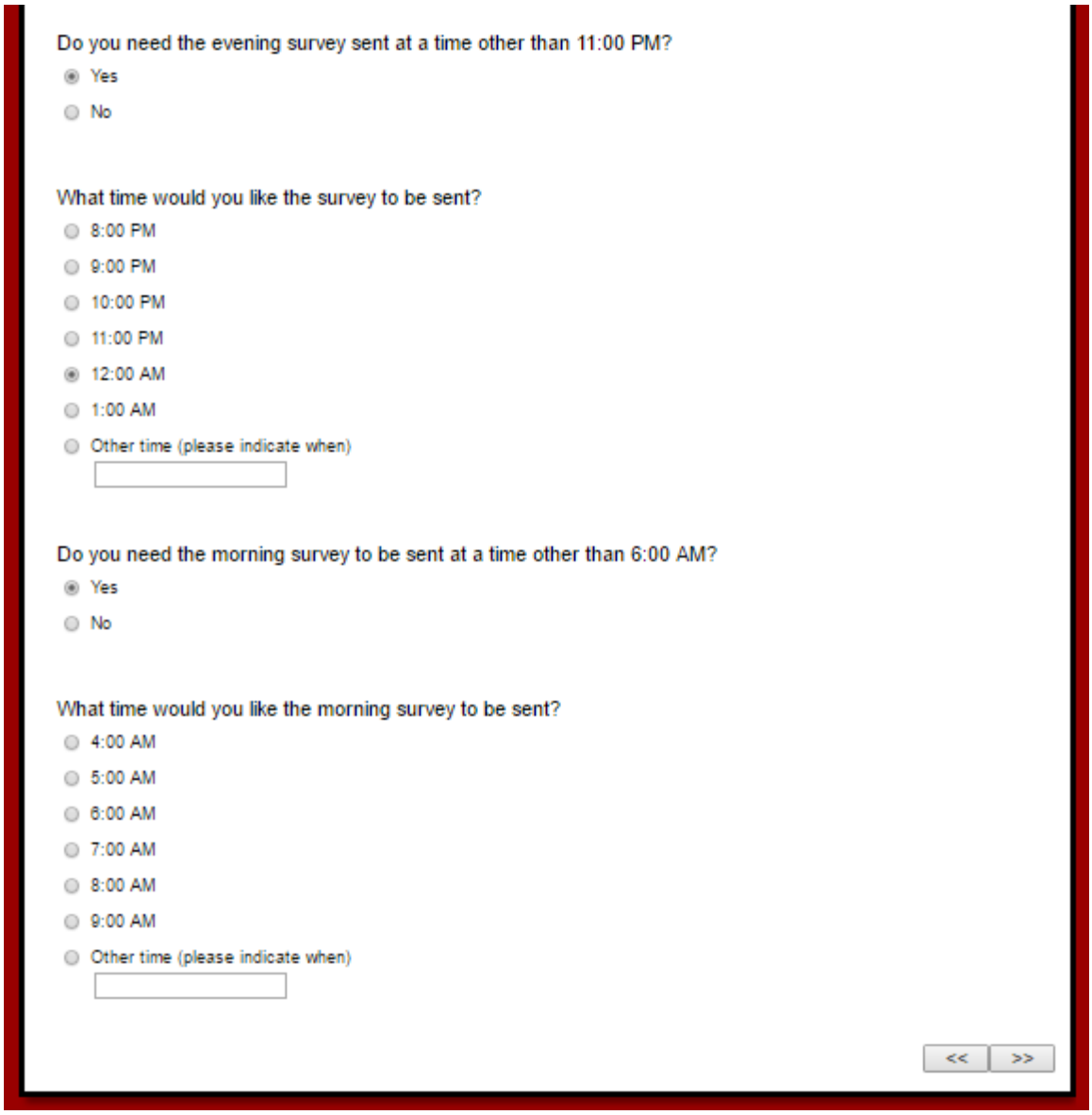
Do you need the evening survey sent at a time other than 11:00 PM?
Yes
No
What time would you like the survey to be sent?
8:00 PM
9:00 PM
10:00 PM
11:00 PM
12:00 AM
1:00 AM
Other time (please indicate when)
Do you need the morning survey to be sent at a time other than 6:00 AM?
Yes
No
What time would you like the morning survey to be sent?
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
Other time (please indicate when)
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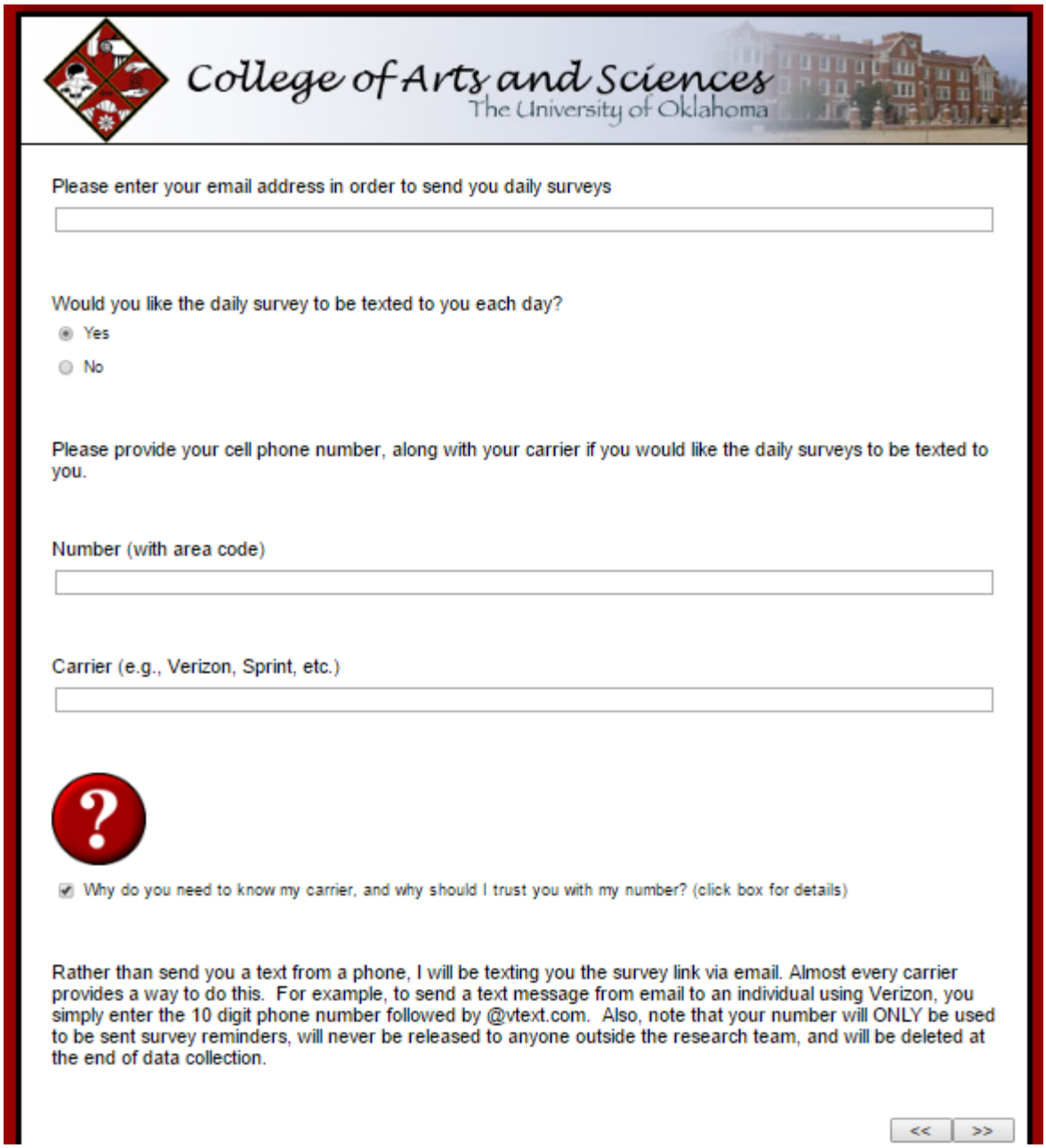
College of Arts and Sciences
The University of Oklahoma
Please enter your email address in order to send you daily surveys
Would you like the daily survey to be texted to you each day?
Yes
No
Please provide your cell phone number, along with your carrier if you would like the daily surveys to be texted to you.
Number (with area code)
Carrier (e.g., Verizon, Sprint, etc.)
Why do you need to know my carrier, and why should I trust you with my number? (click box for details)
Rather than send you a text from a phone, I will be texting you the survey link via email. Almost every carrier provides a way to do this. For example, to send a text message from email to an individual using Verizon, you simply enter the 10 digit phone number followed by @vtext.com. Also, note that your number will ONLY be used to be sent survey reminders, will never be released to anyone outside the research team, and will be deleted at the end of data collection.
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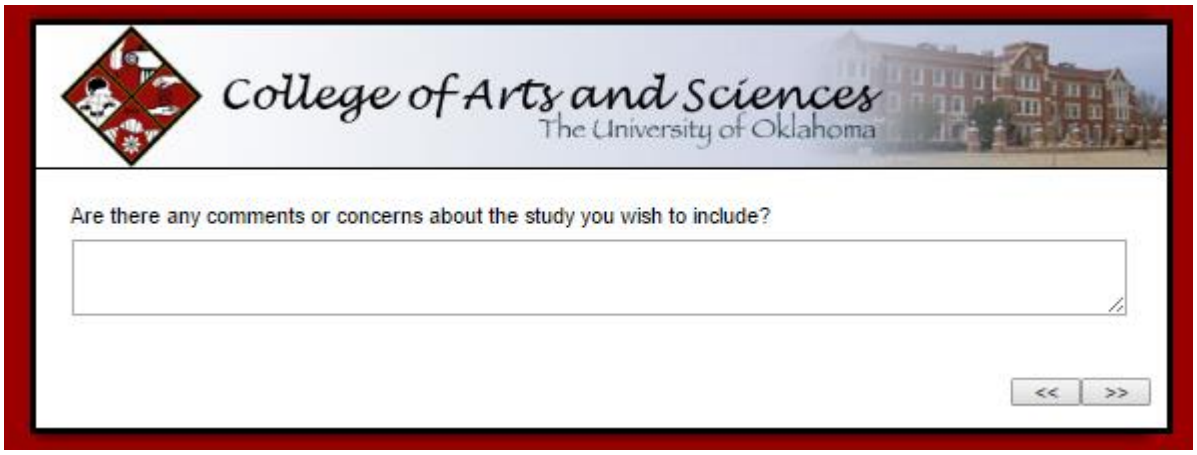
College of Arts and Sciences
The University of Oklahoma
Are there any comments or concerns about the study you wish to include?
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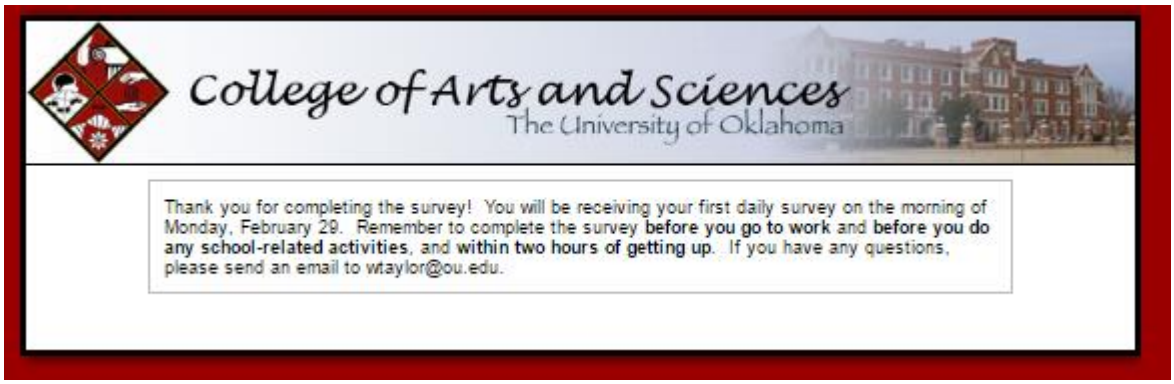
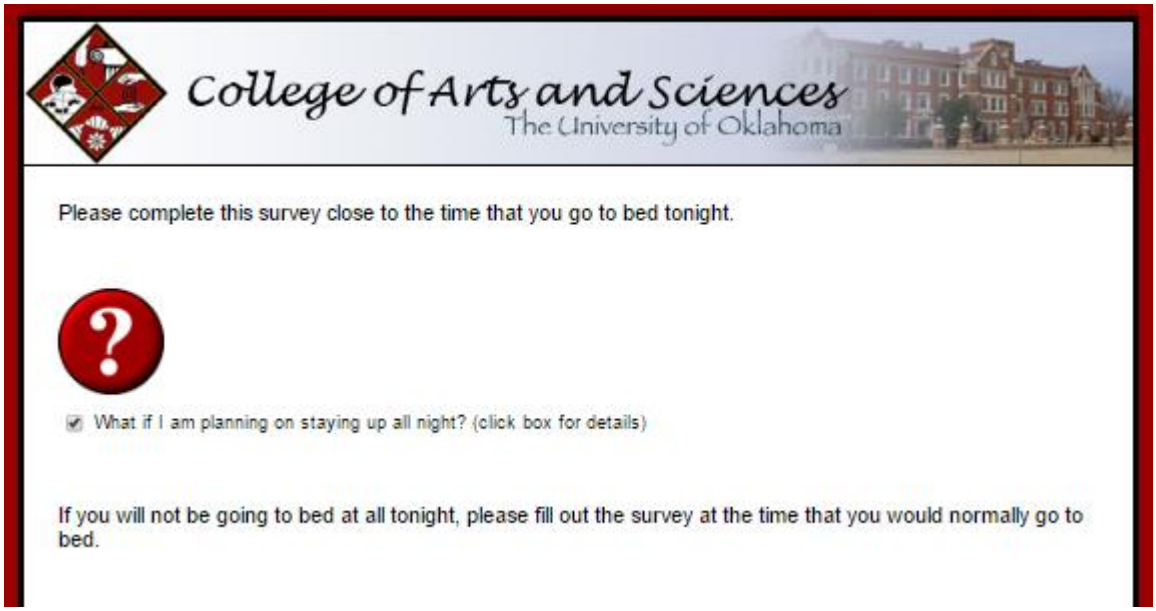
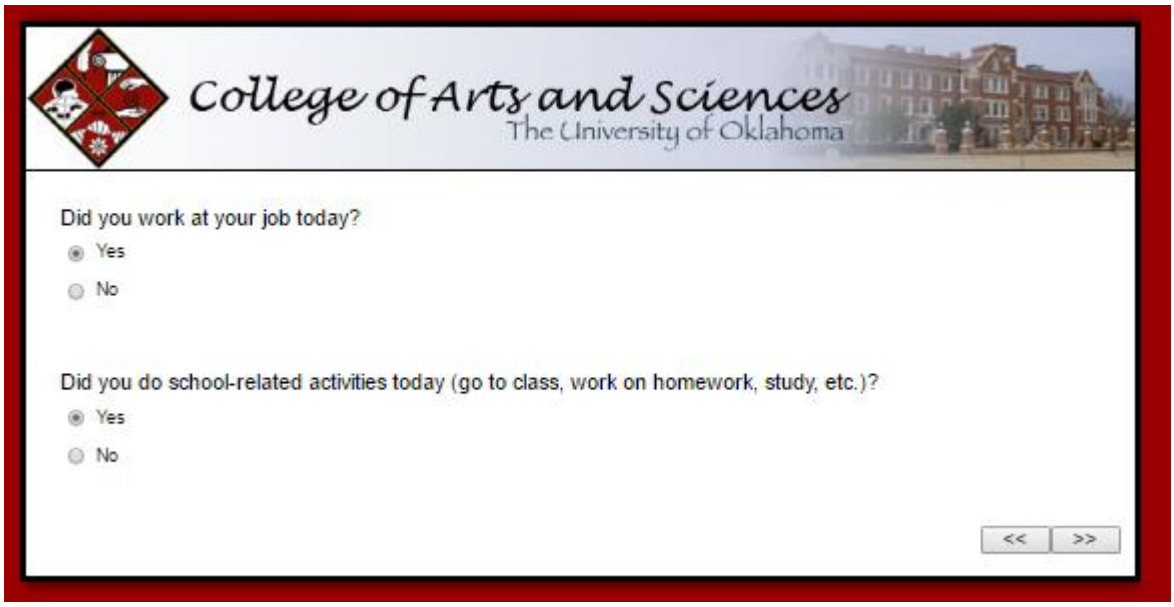

College of Arts and Sciences
The University of Oklahoma
Thank you for completing the survey! You will be receiving your first daily survey on the morning of Monday, February 29. Remember to complete the survey before you go to work and before you do any school-related activities, and within two hours of getting up. If you have any questions, please send an email to wtaylor@ou.edu.

Evening Survey





Please indicate how much you agree with the following statements regarding how you feel right now:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I feel recovered from everything that happened today	○	○	○	○	○	○	○
I feel relaxed	○	○	○	○	○	○	○
I am in a good mood	○	○	○	○	○	○	○

Please indicate how much you agree with the following statements regarding how you feel right now:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I feel tired	○	○	○	○	○	○	○
I feel physically drained	○	○	○	○	○	○	○
I feel fed up	○	○	○	○	○	○	○
I feel like my "batteries" are "dead"	○	○	○	○	○	○	○
I feel burned out	○	○	○	○	○	○	○
My thinking process is slow	○	○	○	○	○	○	○
I have difficulty concentrating	○	○	○	○	○	○	○
I feel I'm not thinking clearly	○	○	○	○	○	○	○
I feel I'm not focused in my thinking	○	○	○	○	○	○	○
I have difficulty thinking about complex things	○	○	○	○	○	○	○

The following statements are about how you feel right now. Please read each statement carefully and indicate the extent to which you agree or disagree.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I feel bursting with energy	○	○	○	○	○	○	○
I feel strong and vigorous	○	○	○	○	○	○	○
I feel energetic	○	○	○	○	○	○	○
I feel I have physical strength	○	○	○	○	○	○	○

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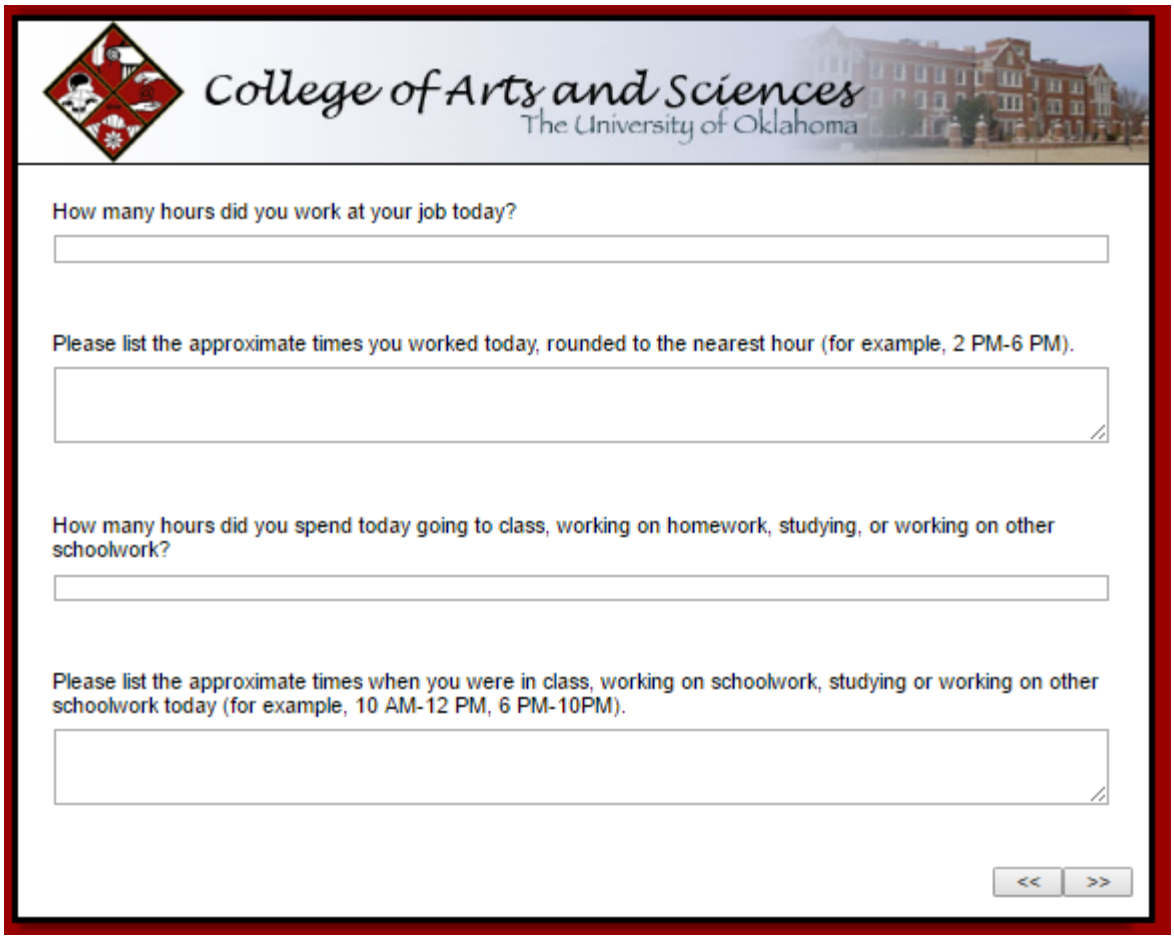
College of Arts and Sciences
The University of Oklahoma
How many hours did you work at your job today?
Please list the approximate times you worked today, rounded to the nearest hour (for example, 2 PM-6 PM).
How many hours did you spend today going to class, working on homework, studying, or working on other schoolwork?
Please list the approximate times when you were in class, working on schoolwork, studying or working on other schoolwork today (for example, 10 AM-12 PM, 6 PM-10PM).
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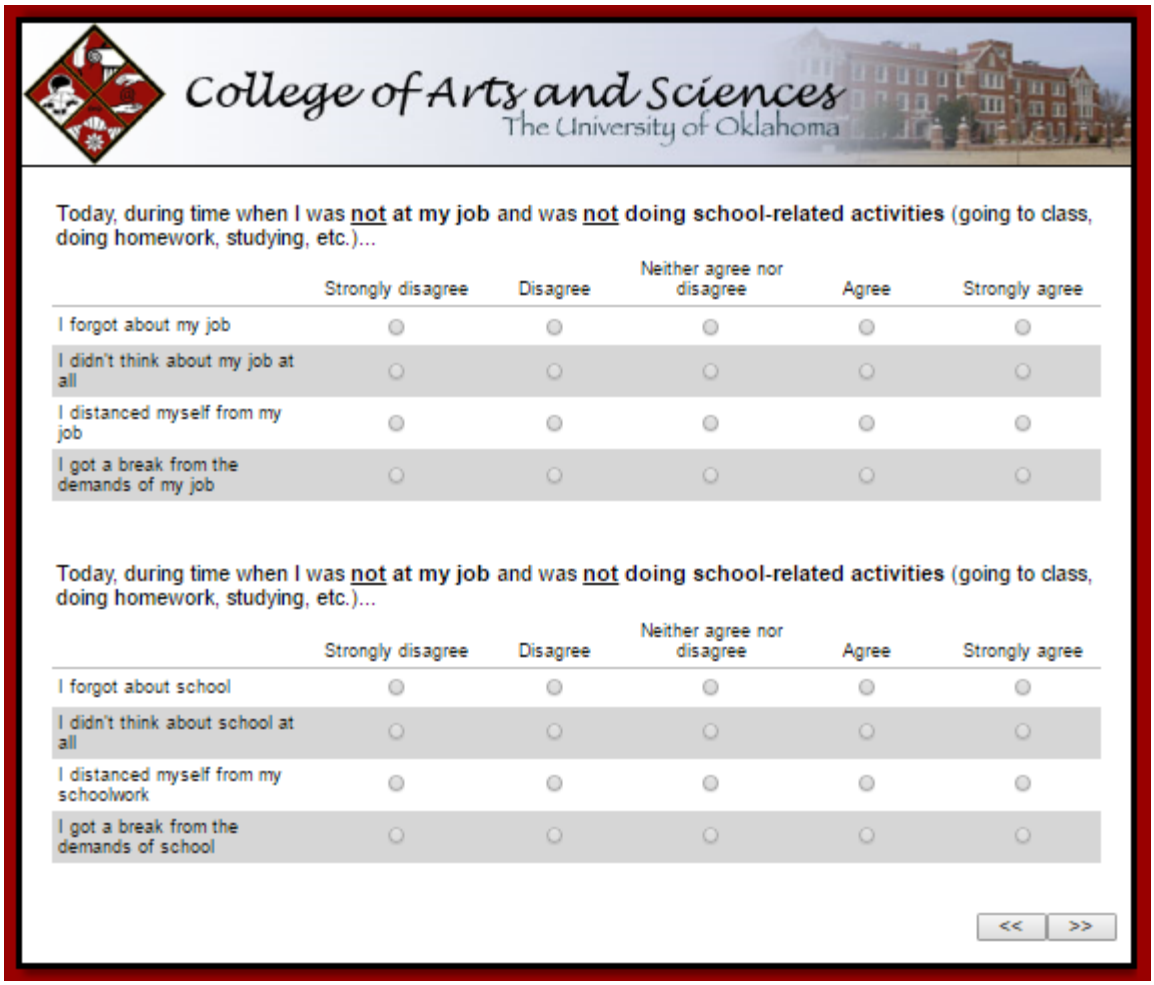
College of Arts and Sciences
The University of Oklahoma
Today, during time when I was not at my job and was not doing school-related activities (going to class, doing homework, studying, etc.)...
Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
I forgot about my job
I didn't think about my job at all
I distanced myself from my job
I got a break from the demands of my job
Today, during time when I was not at my job and was not doing school-related activities (going to class, doing homework, studying, etc.)...
Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
I forgot about school
I didn't think about school at all
I distanced myself from my schoolwork
I got a break from the demands of school
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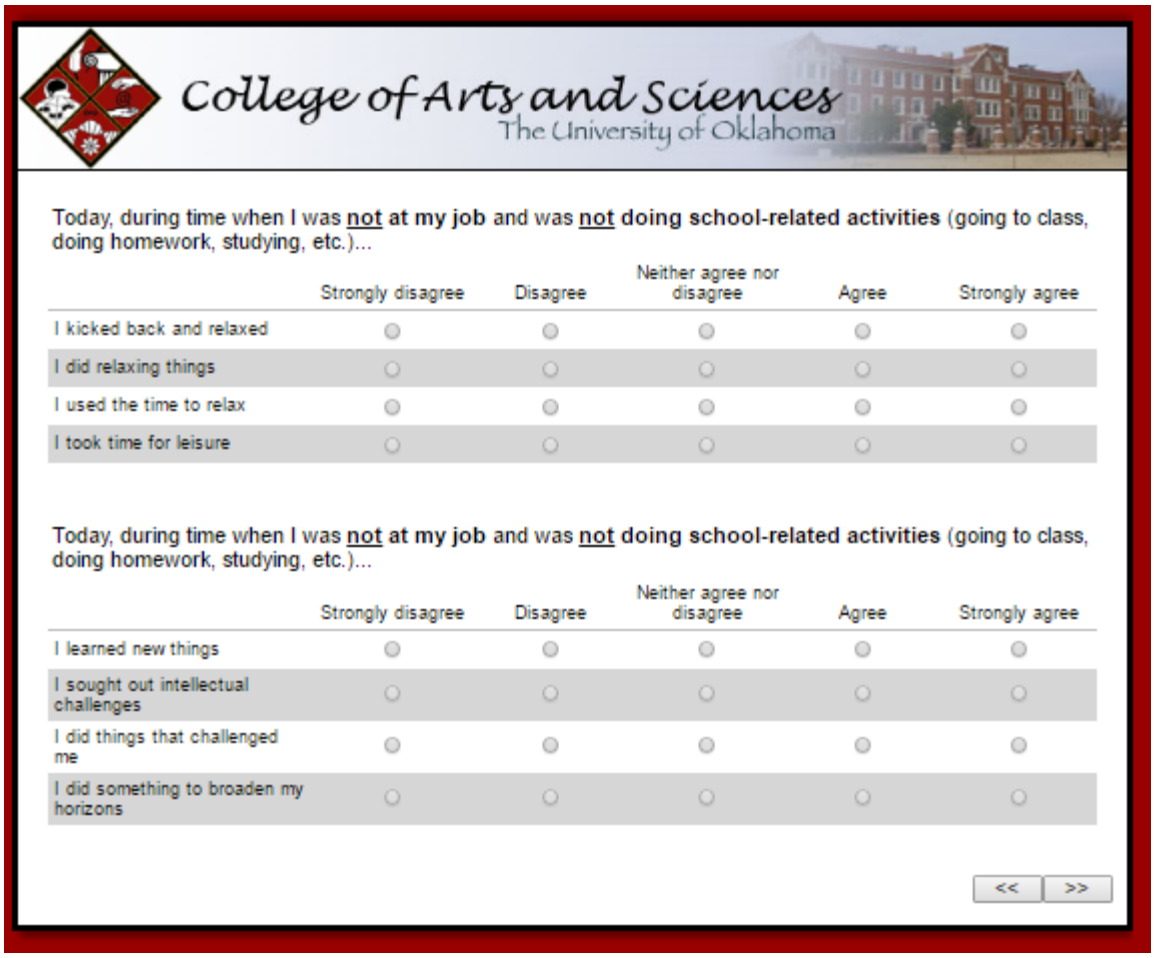
College of Arts and Sciences
The University of Oklahoma
Today, during time when I was not at my job and was not doing school-related activities (going to class, doing homework, studying, etc.)...
Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
I kicked back and relaxed
I did relaxing things
I used the time to relax
I took time for leisure
Today, during time when I was not at my job and was not doing school-related activities (going to class, doing homework, studying, etc.)...
Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
I learned new things
I sought out intellectual challenges
I did things that challenged me
I did something to broaden my horizons
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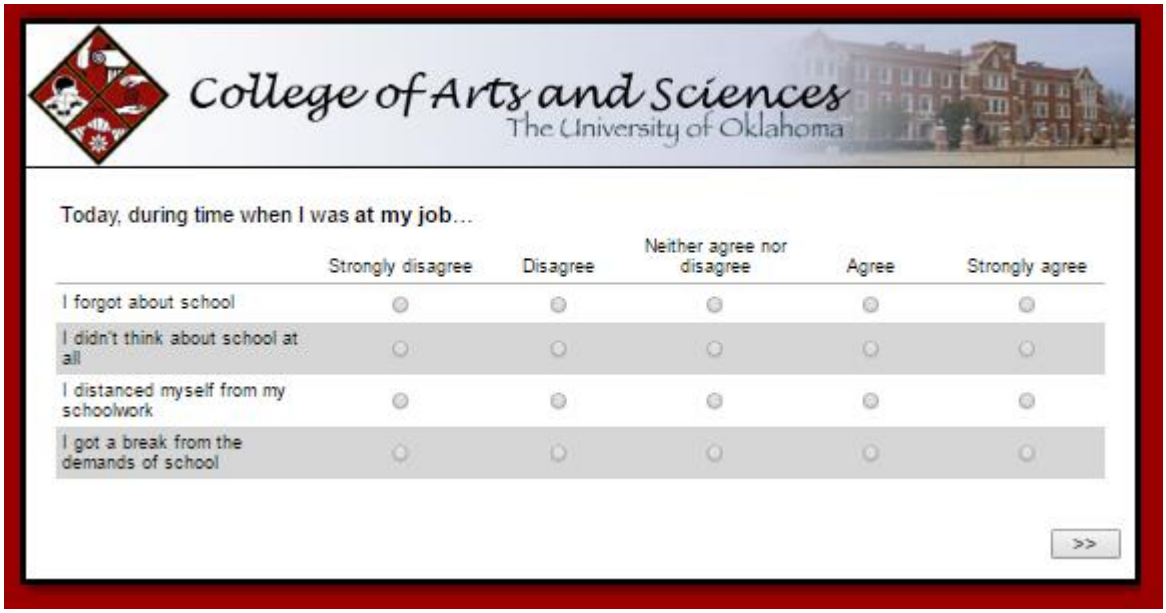
College of Arts and Sciences
The University of Oklahoma
Today, during time when I was at my job...
Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
I forgot about school
I didn't think about school at all
I distanced myself from my schoolwork
I got a break from the demands of school
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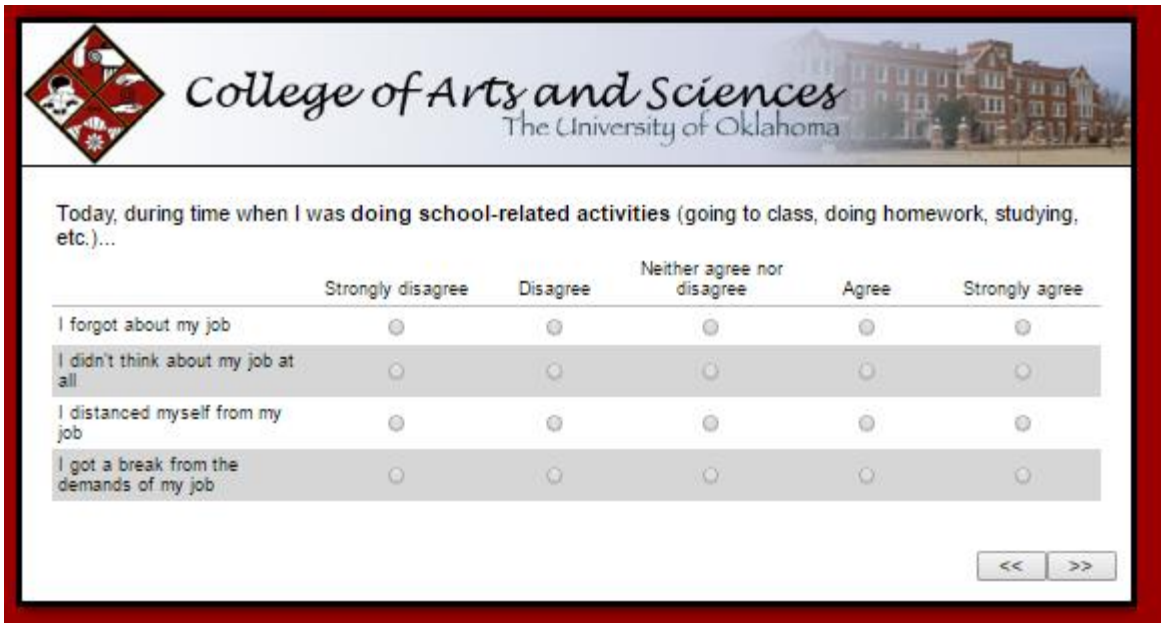
College of Arts and Sciences
The University of Oklahoma
Today, during time when I was doing school-related activities (going to class, doing homework, studying, etc.)...
Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
I forgot about my job
I didn't think about my job at all
I distanced myself from my job
I got a break from the demands of my job
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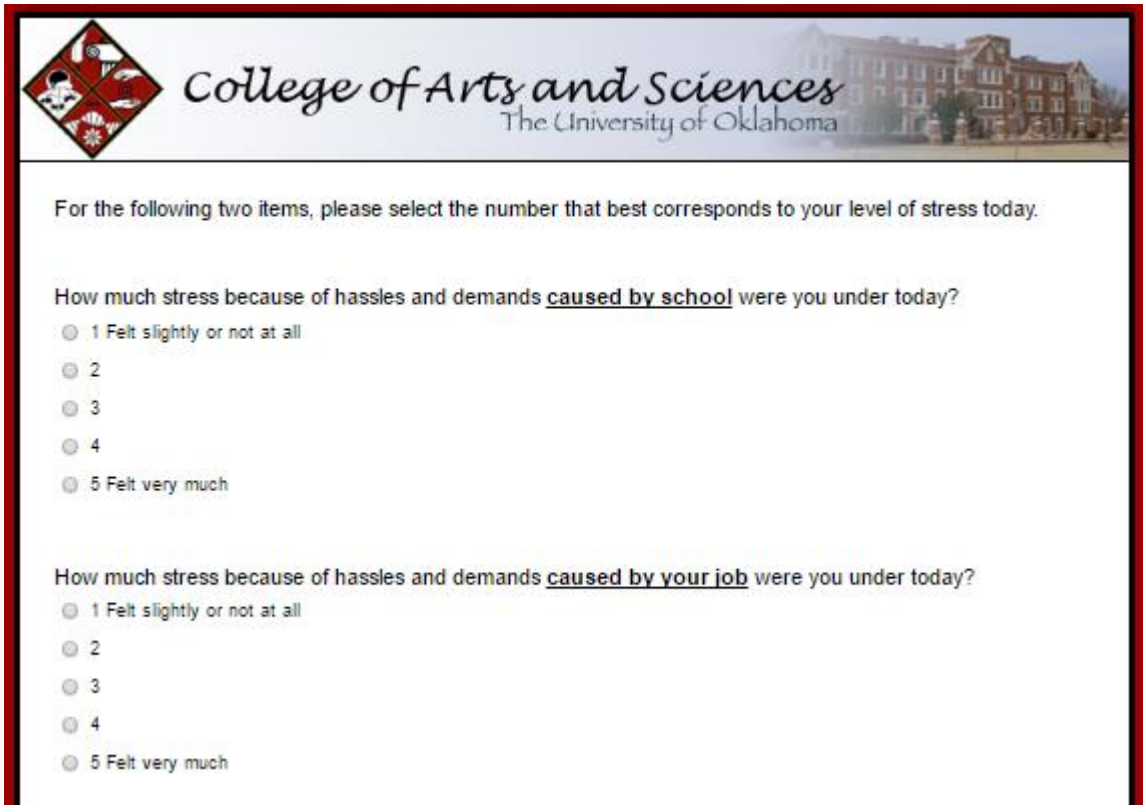
College of Arts and Sciences
The University of Oklahoma
For the following two items, please select the number that best corresponds to your level of stress today.
How much stress because of hassles and demands caused by school were you under today?
1 Felt slightly or not at all
2
3
4
5 Felt very much
How much stress because of hassles and demands caused by your job were you under today?
1 Felt slightly or not at all
2
3
4
5 Felt very much

Did you fill out the morning daily survey today?

- ○ Yes
- ◉ No

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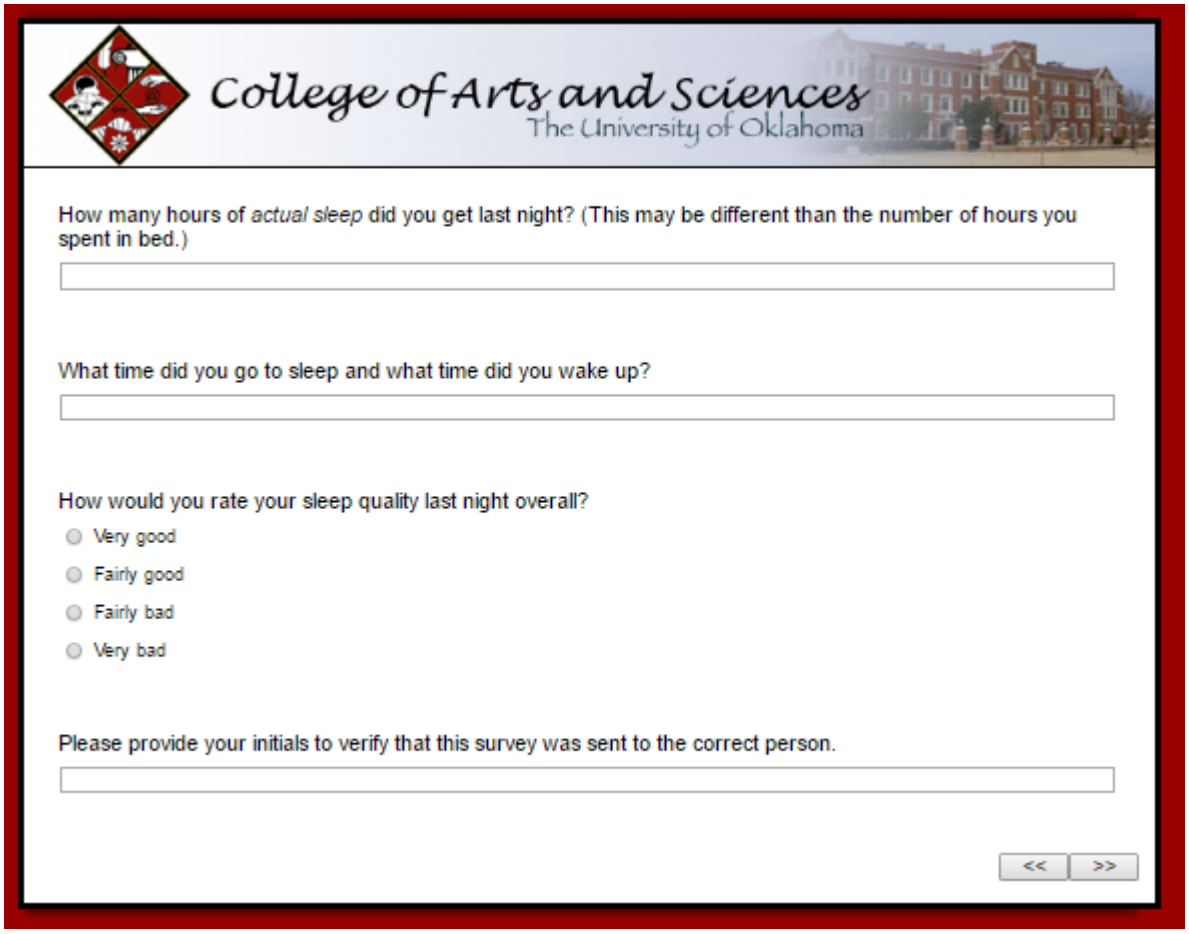
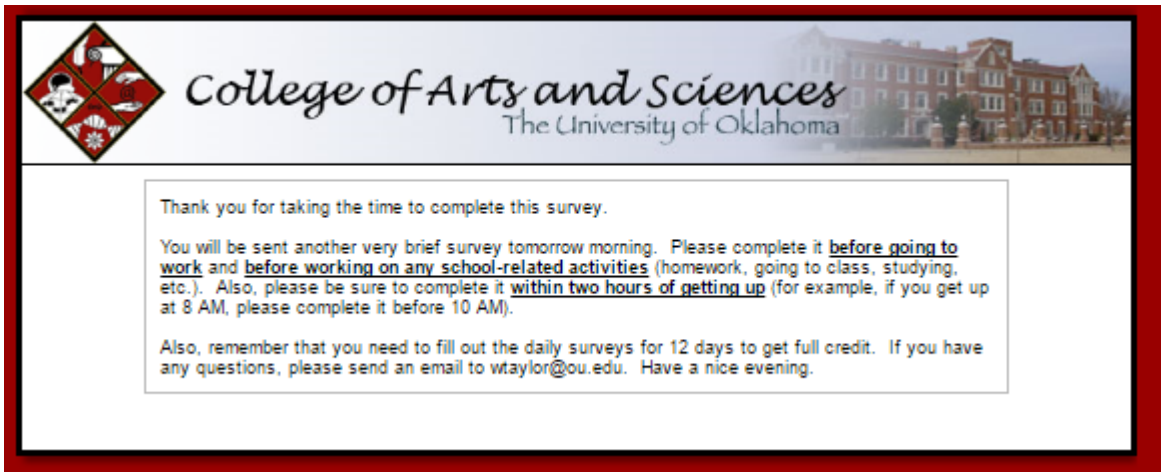
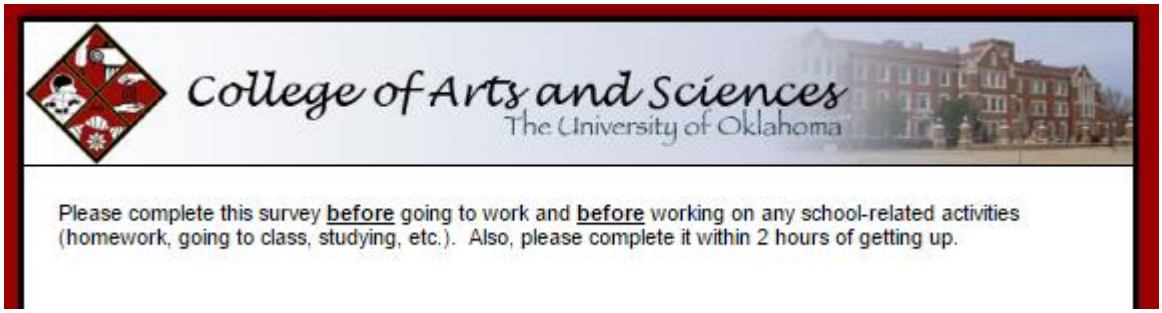
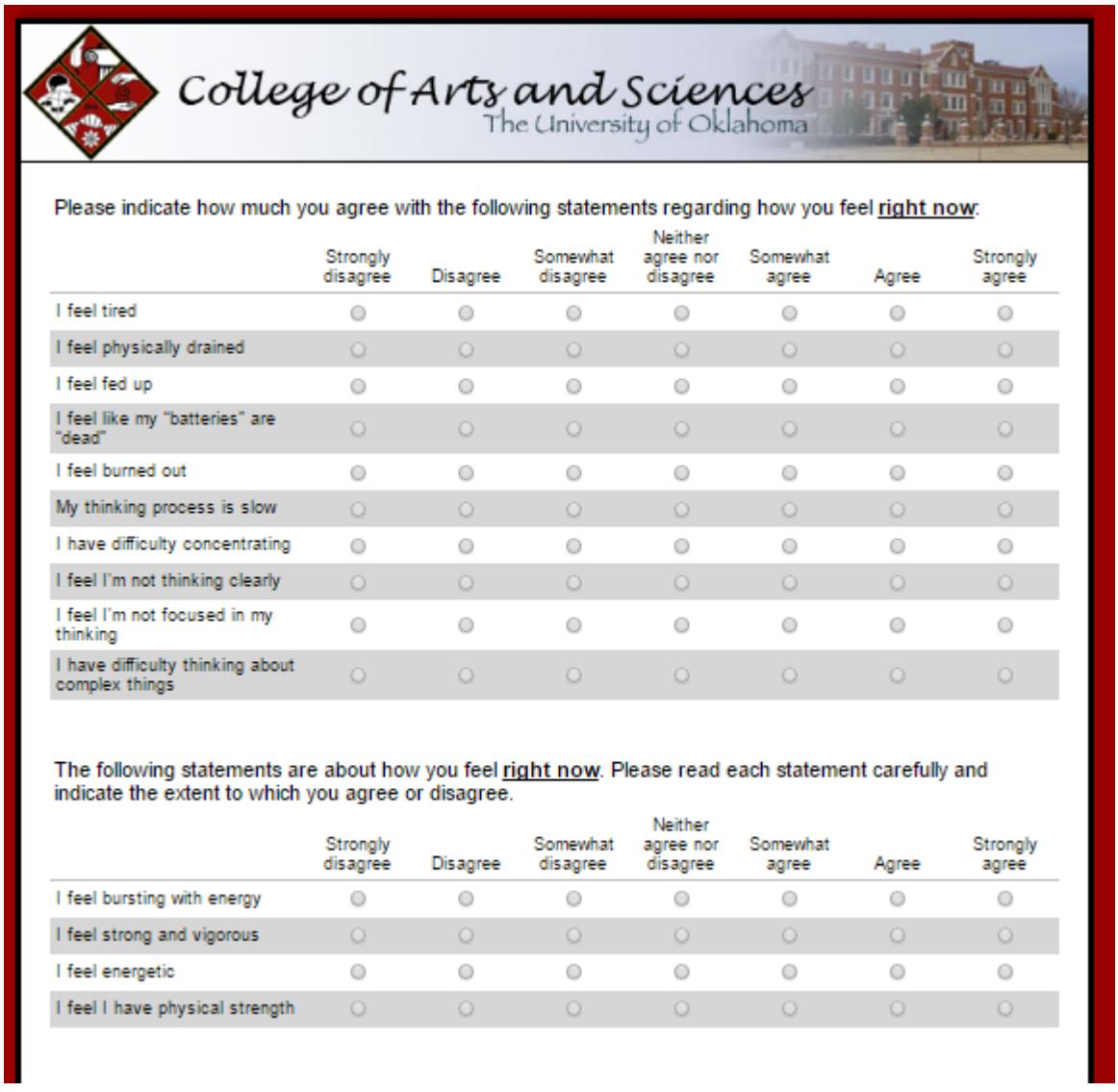



College of Arts and Sciences
The University of Oklahoma
Thank you for taking the time to complete this survey.
You will be sent another very brief survey tomorrow morning. Please complete it before going to work and before working on any school-related activities (homework, going to class, studying, etc.). Also, please be sure to complete it within two hours of getting up (for example, if you get up at 8 AM, please complete it before 10 AM).
Also, remember that you need to fill out the daily surveys for 12 days to get full credit. If you have any questions, please send an email to wtaylor@ou.edu. Have a nice evening.

Morning Survey





Please indicate how much you agree with the following statements regarding how you feel **right now:**

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I feel recovered from everything that happened yesterday	○	○	○	○	○	○	○
I feel relaxed	○	○	○	○	○	○	○
I am in a good mood	○	○	○	○	○	○	○

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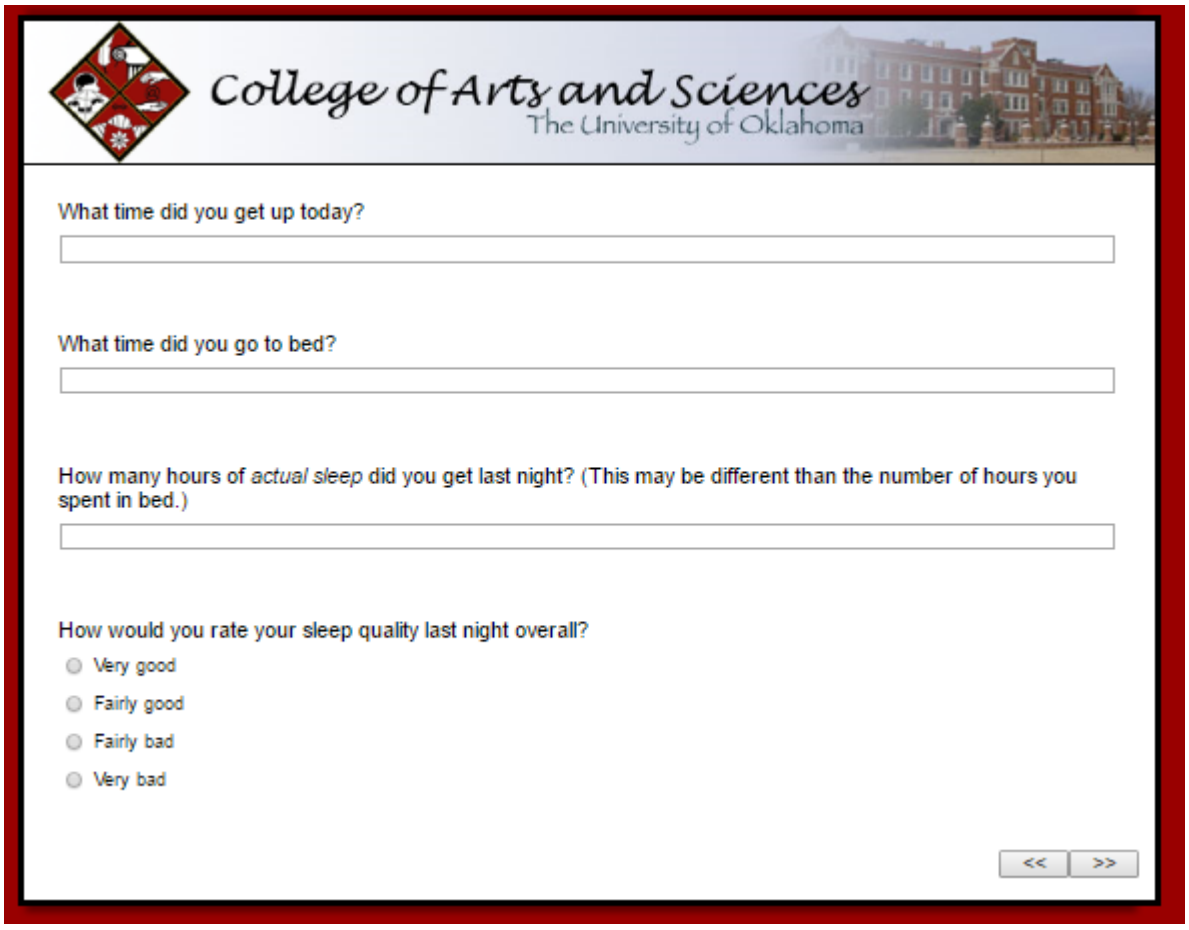

What time did you get up today?

What time did you go to bed?

How many hours of *actual sleep* did you get last night? (This may be different than the number of hours you spent in bed.)

How would you rate your sleep quality last night overall?

- ○ Very good
- ○ Fairly good
- ○ Fairly bad
- ○ Very bad

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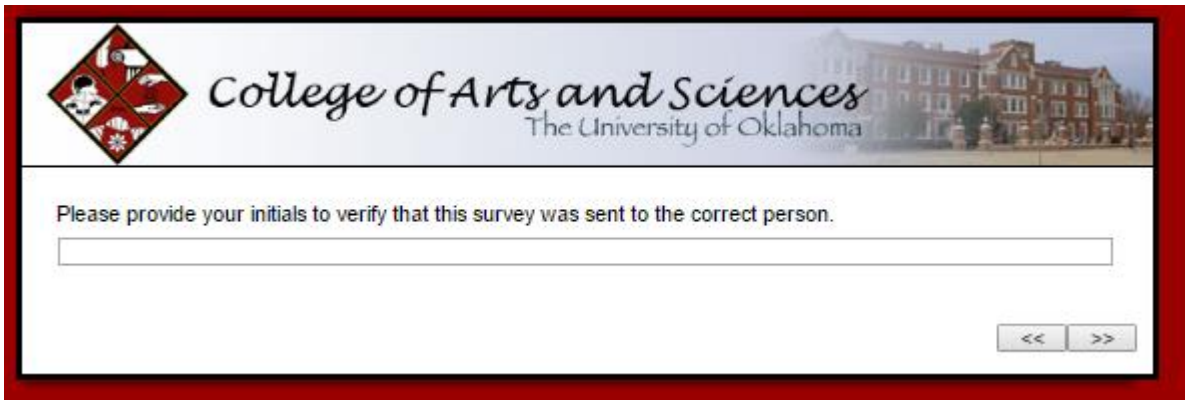
College of Arts and Sciences
The University of Oklahoma
Please provide your initials to verify that this survey was sent to the correct person.
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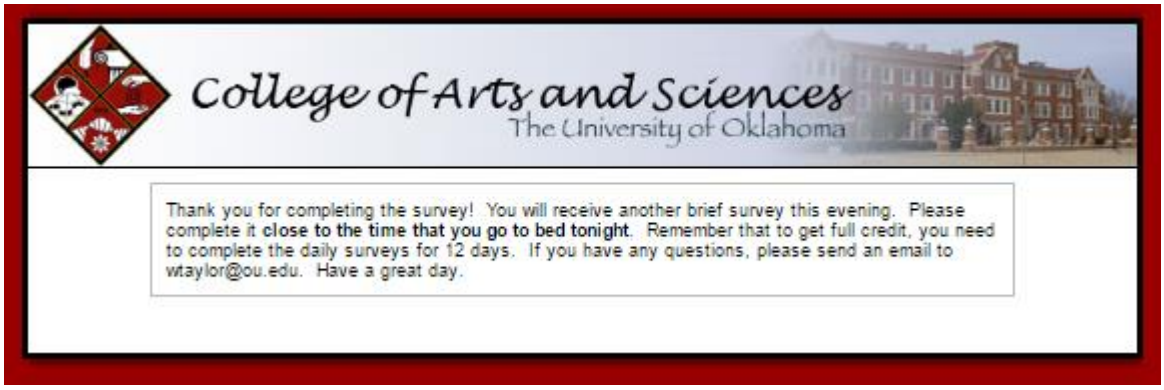

College of Arts and Sciences
The University of Oklahoma
Thank you for completing the survey! You will receive another brief survey this evening. Please complete it close to the time that you go to bed tonight. Remember that to get full credit, you need to complete the daily surveys for 12 days. If you have any questions, please send an email to wtaylor@ou.edu. Have a great day.

Appendix J: IRB Approval

The UNIVERSITY of OKLAHOMA

Institutional Review Board for the Protection of Human Subjects

Approval of Initial Submission – Expedited Review – AP01

Date: September 25, 2015

IRB#: 5944

Principal Investigator: William Demar Taylor

Approval Date: 09/25/2015

Expiration Date: 08/31/2016

Study Title: A Daily Study of Student-Workers

Expedited Category: 7

Collection/Use of PHI: No

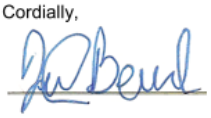
On behalf of the Institutional Review Board (IRB), I have reviewed and granted expedited approval of the above-referenced research study. To view the documents approved for this submission, open this study from the *My Studies* option, go to *Submission History*, go to *Completed Submissions* tab and then click the *Details* icon.

As principal investigator of this research study, you are responsible to:

- Conduct the research study in a manner consistent with the requirements of the IRB and federal regulations 45 CFR 46.
- Obtain informed consent and research privacy authorization using the currently approved, stamped forms and retain all original, signed forms, if applicable.
- Request approval from the IRB prior to implementing any/all modifications.
- Promptly report to the IRB any harm experienced by a participant that is both unanticipated and related per IRB policy.
- Maintain accurate and complete study records for evaluation by the HRPP Quality Improvement Program and, if applicable, inspection by regulatory agencies and/or the study sponsor.
- Promptly submit continuing review documents to the IRB upon notification approximately 60 days prior to the expiration date indicated above.
- Submit a final closure report at the completion of the project.

If you have questions about this notification or using iRIS, contact the IRB @ 405-325-8110 or irb@ou.edu.

Cordially,



Fred Beard, Ph.D.
Vice Chair, Institutional Review Board